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Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                   Zhao, Qing A.
Wang, Zhiwei
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ORGANISM: Homo sapiens
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Best Local Similarity
Matches 669; Conserv
                                                                   721 GWP 723
                                                                                                     GWP 670
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No. 1.9e-293;
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                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No. US20040038267A1 5560161CDI
US-10-451-207-2
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APPLICANT: KHAN, Farrah A.

APPLICANT: YAO, Monique G.
APPLICANT: BMERLING, BROOKE M.

TITLE OF INVENTION: INTRACELUIAR SIGNALING MOLECULES
FILE REFERENCE: PF-0868 USN
CURRENT APPLICATION NUMBER: US/10/451,207
CURRENT FILING DATE: 2003-06-18
FRIOR APPLICATION NUMBER: US 60/257,804
FRIOR PELING DATE: 2001-12-19
PRIOR PELING DATE: 2001-12-21
FRIOR APPLICATION NUMBER: US 60/260,102
FRIOR PERL FROGRAM
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Matches 670; Conservative
                                                                                                                                                                                                                                                                                                    TYPE: PRT
ORGANISM: Homo sapiens
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61 VHVGPMNPQLHAVGCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVR 120
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21 -------GCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVR
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TITLE OF INVENTION: Secreted Polypeptides
FILE REFERENCE: 805A
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CURRENT PAPLICATION NUMBER: US/10/112,944

CURRENT FILING DATE: 2002-03-28

PRIOR APPLICATION NUMBER: US 09/488,725

PRIOR FILING DATE: 2000-01-21

PRIOR FILING DATE: 2000-01-25

PRIOR FILING DATE: 2000-02-03

PRIOR PAPLICATION NUMBER: US 09/496,914

PRIOR PLING DATE: 2000-02-03

PRIOR PELING DATE: 2000-02-28

PRIOR PILING DATE: 2000-03-07

PRIOR FILING DATE: 2000-03-07

PRIOR FILING DATE: 2000-03-07

PRIOR FILING DATE: 2000-03-07

PRIOR FILING DATE: 2000-03-11

PRIOR FILING DATE: 2000-03-11

PRIOR FILING DATE: 2000-03-11

PRIOR FILING DATE: 2000-03-18

PRIOR FILING DATE: 2000-05-18

PRIOR FILING DATE: 2000-05-18
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Publication No. US20040048249A1
GENERAL INFORMATION:
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Wehrman, Tom
Ghosh, Malabika
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APPLICANT: Yang, Yonghong
APPLICANT: Weng, Gezhi
APPLICANT: Zhang, Jie
APPLICANT: Ren, Feiyan
APPLICANT: Xue, Aidong J.
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ETVALELSYVNSNLQLLKEELEELSGGVDPGRHGSEAVTVPMIPLGLKETKELDWSTPLK 180
                                                            RAAGAFSLLRENFSHAPSPDMSAASLCALEQLMMAQAQECVFEGLSPPASWAPQDCLAQL 360
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---KGYGSFYQNQPGQLQSHRARLHQQISKELRMRTGAENLYRATSNTWVR 74
                                                                                                    ELISVHFGEDGASYEAEIRELEALROAMRTPSRNESGLELLTAYYNQLCFLDARFLTPAR
                                                                                                                                                              SLGLFFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQ
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TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND I
TITLE OF INVENTION: THEREOF
FILE REFERENCE: ¢LO01099-CIP-DIV
CURRENT APPLICATION NUMBER: US/10/274,878
CURRENT PILING DATE: 2001-05-07
PRIOR APPLICATION NUMBER: 09/489,334
PRIOR FILING DATE: 2001-05-07
PRIOR FILING DATE: 2001-05-07
RROW FILING DATE: 2001-05-07
RNOWBER OF SEQ ID NOS: 4
SOFTWARE: FastSEQ for Windows Version 4.0
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61.8%; Score 2331; DB 14;
Best Local Similarity 67.0%; Pred. No. 2.7e-195;
Matches 473; Conservative 49; Mismatches 112;
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Publication No. US20030049792A1
GENERAL INFORMATION
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| Publication No. US20040067522A1
| GENERAL INFORMATION:
| TITLE OF INVENTION: ISOLATED HUAIN KINASE PROTEINS, NUCLBIC TITLE OF INVENTION: THEREOF SUCCODING HUMAN KINASE PROTEINS, AND USES TITLE OF INVENTION: THEREOF SUCCODING HUMAN KINASE PROTEINS, AND USES FILE REFERENCE: CLOO1099-CIP-DUV2 CURRENT APPLICATION NUMBER: US/10/697,266
| FILE REFERENCE: CLOO1099-CIP-DV2 CURRENT FILING DATE: 2002-10-22
| PRIOR APPLICATION NUMBER: 09/849,634
| PRIOR FILING DATE: 2001-02-07
| NUMBER: OF SEQ ID NOS: 4
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                                                                                                                 361 RLAQEAAQVAAEYRLVHRTMAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDGS
                                                                                                                                                                              PATEGEL PTHEOVEL OPPTSSKPRGPVL POELEERROLGKAHLKRAILGGEEALRLHALC
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Pred. No. 2.7e-195;
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Best Local Similarity 67.0%;
Matches 473; Conservative 45
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- 64
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540

1 MILEERPDGAGAGEESPRLQISRRKPRKTRVSSLRGRREGLRDVCAWRGCRVHRGEDPVR

GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

July 13, 2004, 11:14:21; Search time 83 Seconds (without alignments) 2748.430 Million cell updates/sec Run on:

US-10-697-266-2 Title: Perfect score:

1 MILEERPDGAGEESPRLQ.....QPCAPVKPAPPSSLKHPGWP 723

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

Sequence:

Total number of hits satisfying chosen parameters: 1017041 segs, 315518202 residues Searched:

1017041

seg length: 0 seg length: 200000000 Minimum DB Maximum DB

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

SPTREMBL 25:* Database

sp_rodent:*
sp_virus:*
sp_vertebrate:*
sp_unclassified:* sp_fungi:*
sp_human:*
sp_invertebrate:*
sp_mammal:*
sp_mhc:* sp_rvirus:*
sp_bacteriap:* sp_archea:* sp_bacteria:* sp_fungi:* sp_organelle:* sp_phage:* sp archeap:* sp_plant:* 9: 10: 11: 12: 13:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Q8bxg3 canis famil Q8bxg3 canis famil Q8bxg3 homo sapien Q8bx2 homo sapien Q9dbx2 mus musculu Q8n3t7 homo sapien Q96rul homo sapien Q9xxy9 drosophila Q9xxp2 drosophila Q8n9d6 homo sapien Q9p257 homo sapien Q9h387 homo sapien Q803bl brachydanio Q8bwr8 mus musculu Q8tavl homo sapien Q96pv9 homo sapien Description SUMMARIES Q8TAV1 Q96PV9 Q80WU2 Q803B1 Q8HXG3 Q8NE33 Q8TUC4 Q9DBN2 Q8N3T7 Q8BWR8 Q96RU1 Q9XXY9 Q9VXP2 Q8N9D6 Q9P257 Q9H3S7 Query Match Length DB 344.9 334.9 332.3 332.3 342.3 342.3 342.3 343.3 3 343.3 343.3 343.3 343.3 343.3 343.3 343.3 343.3 343.3 343.3 343. 1496 1316 1284 1255 1255 1242 1237 1185.8 887.5 Score 394 387 380.5 Result

Q8t7k0 dictyosteli Q81nh8 arabidopsis Q81nu2 oryza sativ Q8w14 yarrowia li	VAXIO GIGULODEES O1783 SCHIZOSACCH Q81114 Caenorhabdi Q81115 Caenorhabdi	V./Syd. Drachydanio Q/yxc7 caenorhabdi Q80y09 mus musculu Q8vuh6 drosophila Q8vuh6 drosophila		yswuz candind alb Oywus drosophila Oyw562 drosophila O8mks8 drosophila O8mks7 drosophila Q8imd0 drosophila	Q8iuv5 homo šapien Q846w6 streptcomyce Q9esj5 mus musculu Q7syh9 gallus gall Q84em0 rhodobacter Q8ndg1 homo sapien
5 Q8T7K0 10 Q8H1H8 10 Q8LNU2 3 Q8WZL4 10 Q9XT56	3 013783 5 081114 5 081115 13 078703	5 QYXXC7 11 Q80Y09 5 Q9VUH6 5 0960G3		5 Q9VGV8 5 Q9VS62 5 Q8MKS8 5 Q8MKS7 5 Q8IMD0	4 Q8IUV5 2 Q846W6 11 Q9ESJ5 13 Q7SYH9 2 Q84EM0 4 Q8NDG1
794 846 883 773 816	775 846 882 465	498 872 1833 1838	847 836 661 266 785		942 3753 1024 799 1151 966
8.9 8.8 7.8 7.7	0. r . r . r . r . r . r . r . r . r . r			44446	4 4 4 E E E H H O Q Q B
335.5 333 295.5 292.5 289	285.5 284.5 284.5 284	276.5 266.5 262.5 262.5	255.5 239 232 224.5 203.5	165.5 165.5 165 162 162	155.5 155.5 151 149 144
17 18 19 20 21	222 223 242 254	26 27 28 29	30 32 33 34	333 333 333 333 333 333 333 333 333 33	4 4 4 4 4 5 4 5 6 6 7

ALIGNMENTS

۲, 1 MILEERPDGAGGESPRLQISRRKPRKTRVSSLRGRREGLRDVCAWRGCRVHRGEDPVR 60 Indels 53; Gaps Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. NCBI_TaxID=9606; 91.4%; Score 3449.5; DB 4; Length 670; 92.7%; Pred. No. 1.2e-239; ive 0; Mismatches 0; Indels 53; 73589 MW; CE8C01B716465FF0 CRC64; QBTAV1;
01-UTN-2002 (TrEMBLrel. 21, Created)
01-UTN-2002 (TrEMBLrel. 21, Last sequence update)
01-UTN-2003 (TrEMBLrel. 24, Last annotation update)
Similar to GTP-rho binding protein 1. 670 AA. PRT; 1 MILEERPDGAGAGEESPRLO-Query Match
Best Local Similarity 92.7°
Matches 670; Conservative PRELIMINARY; 670 AA; SEQUENCE FROM N.A. TISSUE=Blood; SEQUENCE Q8TAV1 RESULT 1 Q8TAV1 ò g

us-10-697-266-2.rspt

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NCBI_TaxID=10090;
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                                                                                                                                                           SEQUENCE
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MEDINE=21456161; PubMed=11572484;
MEDINE=21456161; PubMed=0.;
Nagase T., Kikuno R., Ohara O.;
"Prediction of the coding sequences of unidentified human genes. XXI. The complete sequences of 60 new cDNA clones from brain which code for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GLKEGDYIVSVNGQPCRWWRHAEVVTELKAAGEAGASLQVVSLLPSSRLPSLGDRRPVLL
                                                                                                                                                                                                                                                                                                       RAAGAFSLIKENFSHAPSPDMSAASLCALEQLMWAQAQECVFEGLSPPASMAPQDCLAQL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PATEGELPTHEOVFLOPPISSKPRGPVLPOELEERROLGKAHLKRAILGGEEALRLHALC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KGPDIFHRLGPLSVFSAKNRWRLVGPVHLTRGEGGFGLTLRGDSPVLIAAVIPGSQAAAA
                    61 VHVGPMNPQLHAVGCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVR
                                                  ------GCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DT-2003 (TrEMBLrel. 24, Last annotation update)
Hypothetical protein KIAA1929 (Fragment).
KIAA1929.
KIAA1929.
Enkaryota, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia, Butheria; Primates; Catarrhini; Hominidae; Homo.
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DNA Res. 8:179-187(2001).
EMBL; AB067516; BAB67822.1; -.
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10 04068
AC 0967
DT 01-D
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DT 01-J
DE HYPO
GN KIAA
OC EUKA
OC EUKA
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OX NOBI
RA ITSS
RC TISS
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STRAIN-CS7BL/6; TISSUE-Brain;
STRAIN-CS7BL/6; TISSUE-Brain;
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Strausberg R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Buterow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
Brownstein M.J., Ugdin T.B., Toshiyuki S., Carninci P., Perange C.,
Raha S.S., Loguellano N.A., Peters G.J., Abramson R.D., Millahy S.J.,
Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E I
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus
                                                                                                                                                                                                                                                                                                                                                      62;
                                                                                                                                                                                                                                                                                             Length 410;
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                                                                                                                                                                                                                                          410 AA; 45071 MW; 73920DC672235189 CRC64;
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01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Similar to rhophilin, Rho GTPase binding protein 1
Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                             Ouery Match

48.9%; Score 1847; DB 4;
Best Local Similarity 81.4%; Pred. No. 1.3e-124;
Matches 377; Conservative 2; Mismatches 22;
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                         P:signal transduction; IEA.
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GO; GO:0005622; C:intracellular; IEA.
GO; GO:0007165; P:signal transduction
                                                InterPro; IPR004328; BR01.
InterPro; IPR000861; REM_repeat.
Pfam; PF03097; BR01; 1.
Pfam; PF02185; HR1; 1.
SMART; SM0074; HR1; 1.
Hypothetical protein.
NON TER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ELISVHFGEDGASYEAEIRELEALRQAMRTPSRNESGLELLTAYYNQLCFLDARFITPAR 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 VHVGPMNPQLHAVGCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRAISNNRVR 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241 SIGLPFHWYDSLIGVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQ 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RLAQEAAQVAAEYRLVHRTWAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDGS 420
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Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Pahey J., Helton B., Ketteman M., Madan A., Rodrigues S., Sanchez A., Whiting M., Madan A.Y. Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S., Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E., Jones S.J., Marra M.A.; and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MILEERPDGAGAGEESPRLQISRRKPRKTRVSSLRGRREGLRDVCAWRGCRVHRGEDPVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27 ------KGYGSFVQNQPGQLQSHRARLHQQISKELRMRTGAENLYRATSUTWVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RAAGAFSLLRENFSHAPSPDMSAASLCALEQLMMAQAQECVFEGLSPPASMAPQDCLAQL
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Q1-UJN-2003 (TrEMBLrel. 24, Created)

Q1-UJN-2003 (TrEMBLrel. 24, Last sequence update)

Q1-OCT-2003 (TrEMBLrel. 25, Last annotation update)

Similar to rhophilin-2.

Brachydanio rerio (Zebrafish) (Danio rerio).

Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          atch 39.6%; Score 1496; DB 11; Length 451; cal Similarity 67.3%; Pred. No. 2.7e-99; 309; Conservative 28; Mismatches 74; Indels 48
                                                                                                                                                                                                                                                                                                                                        Strausberg R.;
Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     D69B6A232CA19018 CRC64;
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Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR004328; BR01.
InterPro; IPR000861; REM repeat.
Pfam; PF03097; BR01, 1.
Pfam; PF02185; HR1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SMARI; SM00074; HR1; 1.
SEQUENCE 451 AA; 49072 MW;
                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
STRAIN=C57BL/6; TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
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ID Q6
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41 LRDVCAWRGCRVHRGEDPVRVHVGPMNPQLHAVGCDSLTQIQCGQLQSRRAQIHQQIDKE 100
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   459 GKAHLKRAILGQEBALRLHALCRVLREVDLLRAVISQTLQRSLAKYABLDREDDFCBAAE 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             519 APDIQPKTHQKPEARMPRLSQGKGPDIFHRLGPLSVFSAKNRWRLVGPVHLTRGEGGFGL 578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TLRGDSPVLIAAVIPGSQAAAAGLKEGDYIVSVNGQPCRWWRHAEVVTELKAAGEAGASL 638
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PMIPLGLKETKELDWSTPLKELISVHFGEDGASYEAEIRELEALRQAMRTPSRNESGLEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LTAYYNQLCFLDARFLTPARSLGLFFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GARQDRSCTEGARRAMEAFQRAAGAFSLLRENFSHAPSPDMSAASLCALEQLMMAQAQEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        341 VFEGLSPPASMAPQDCLAQLRLAQEAAQYAAEYRLYHRTMAQPPVHDXVPVSWTALVHVK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         291 LFEQITLPGIRNEFFCL--LXMAQEAAKVAETYAQVHQSMIETPITKNVFFFWTTMSOLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           401 AEYFRSLAHYHVAMALCDGSPATEGELPTHEQVFLQ-PPTSSKPRGPV-LPQELBERRQL
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes; Cyprinidae; Danio.
NCBI_TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
34.9%; Score 1316; DB 13; Length
Best Local Similarity 44.3%; Pred. No. 4.5e-86;
Matches 271; Conservative 122; Mismatches 205; Indels
                                                                                                             Strausberg R.; Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases. EMBL; BCO44555, AAH44556.1; GO; GO:0005622; C:intracellular; IEA. GO; GO:0007242; P:intracellular signaling cascade; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                         77001 MW; B06F4D2B088FCB52 CRC64;
                                                                                                                                                                                                                          InterPro; IPR004328; BR01.
InterPro; IPR001478; PDZ.
InterPro; IPR0016861; REM_repeat.
Pfam; PF03097; BR01; 1.
Pfam; PF03185; HR1; 1.
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                                                                                                                                                                                                                                                                                                                                                                  SMART; SM00074; HRI; I.
SMART; SM00228; PDZ; I.
PROSITE; PSS0106; PDZ;
SEQUENCE 683 AA; 770
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                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           161
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AA. 989

PRT;

PRELIMINARY;

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VSIQDVDCKWLTVSEVMKLLKACGRDGVEMKVVSLL
                                                                    PRT;
                                                                                                                                                                                                                                                                                           InterPro; IPR000861; REM_repeat. Pfam; PF03097; BR01; 1. Pfam; PF02185; HR1; 1. SMART; SM00074; HR1; 1. SMART; SM00228; PDZ; 1.
                                                                                                                                                                                                                                                                         InterPro; IPR004328; BRO1.
                                                                    PRELIMINARY;
                                                                                                                                       Homo sapiens (Human)
                                                                                                                                                                                                                                                                                   InterPro; IPR001478;
                                                                                                                                                                                                                                                                                                                                                       686 AA;
                                                                                                                                                                                   [1]
SEQUENCE FROM N.A.
TISSUE=Testis;
                                                                                                                                                                     NCBI_TaxID=9606;
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               559
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                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
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                                                                    Q8NE33
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  439 LODVISVAHERSRIKYAQHQDDDDLINLIDAPDIISKTEQEVEIILPQFSKVTATDFFQK 498
                                                                                                                                                                                                                                                                                                                                                                                                              GCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVRETVALELSYVNSN 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                         LQLLKEELEELSGGVDPGRHGSEAVTVPMIPLGLKETKELDWSTPLKELISVHFGEDGAS 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         374 RLVHRTMAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDG--SPATEGELPTHE 431
                                                                                                                                                                                                                                                                                                                                                                                                                                   83
                                                                                                                         MEDLINE-22361238; PubMed=12473120;
MINCESCU H., Steuve S., Savonet V., Degraef C., Mellor H.,
Mircescu H., Steuve S., Pirson I.;
Dumont J.E., Maenhaut C., Pirson I.;
Identification and characterization of a novel activated RhoB binding protein containing a PDZ domain whose expression is specifically modulated in thyroid cells by cAMP.";
Eur. J Biochem. 269.6241-6249(2002).
Engl. A3347749; CAGS7938.1;
GO. GO:0005522; C:intracellular; IEA.
GO. GO:0007242; P:intracellular signaling cascade; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            314 SHAPSPDMSAASLCALEQIMMAQAQECVFEGLSPPASMAPQDCLAQIRLAQEAAQVAAEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           379 EKCLSQLYDHMPEGLTPLATLKSGHQRRQLGKSHLRRAVAHHEESVREASLCKKLRNIEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        489 LRAVISQTLQRSLAKYAELDREDDFCEAAEAPDIQPKTHQKPEARMPRLSQGKGPDIFHR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LGPLSVFSAKNRWRLVGPVHLTRGEGGFGLTLRGDSPVLIAAVIPGSQAAAAGLKEGDYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQRAAGAFSLLRENF
                                                                                                                                                                                                                                                                                                                                                                                                                          YEAEIRELEALRQAMRTPSRNESGLELLTAYYNQLCFLDARFLTPARSLGLFFHWYDSLT
                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                             Canis familiaris (Dog).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi;
Mammalia, Butheria, Carnivora, Fissipedia, Canidae, Canis.
                                                                                                                                                                                                                                                                                                                                                                                          10;
                                                                                                                                                                                                                                                                                                                                                                     34.0%; Score 1284; DB 6; Length 6|
47.6%; Pred. No. 9.1e-84;
tive 96; Mismatches 196; Indels
                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                   PS50106; PDZ; 1.
686 AA; 76865 MW; DA554284E53C4318 CRC64;
                  Created)
Last sequence update)
Last annotation update)
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                                                                                                                                                                                                                                                                  InterPro; IPR000861; REM_repeat.
Pfam; PP03097; BR01; 1.
Pfam; PF02185; HR1; 1.
Pfam; PF00595; PDZ; 1.
                 01-MAR-2003 (TrEMBLrel. 23,
01-MAR-2003 (TrEMBLrel. 23,
01-JUN-2003 (TrEMBLrel. 24,
                                                                                                                                                                                                                                                                                                                                                                                            274; Conservative
                                                                                                                                                                                                                                                                                                               SMART; SM00074; HR1; 1
SMART; SM00228; PDZ; 1
                                                                                                                                                                                                                                                        InterPro; IPR001478;
                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                     SEQUENCE FROM N.A.
                                                                                                NCBI_TaxID=9615;
                                                      P76RBE protein.
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LRAVISQTLQRSLAKYAELDREDDFCEAAEAPDIQPKTHQKPEARMPRLSQGKGPDIFHR 548
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   374 RLVHRIMAQPPVHDXVPVSWIALVHVKAEYFRSLAHYHVAMALCDG--SPAIBGELPIHE 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           322 QQLHAAMSQAPVKENIPYSWASLACVKAHHYAALAHYFTAILLIDHQVKPGTDLD---HQ 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             84 LQMLKEELEGINISVGVYQNTEEAFTIPLIPLGKETKDVDFAVVLKDFILEHYSEDGYL 143
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LGPLSVFSAKNRWRLVGPVHLTRGEGGFGLTLRGDSPVLIAAVIPGSQAAAAGLKEGDYI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     74 GCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVRETVALELSYVNSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24 GCNPLAQTGRSKLQNQRAALNQQILKAVFMRTGAENLLKVATNSKVREQVRLELSFVNSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          134 LOLLKEELEBLSGGVDPGRHGSEAVTVPMIPLGLKETKELDWSTPLKELISVHFGEDGAS
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                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   33.3%; Score 1255; DB 4; Length 686; 45.9%; Pred. No. 1.1e-81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                      Strausberg R.;
Submitted (AUG-2002) to the EMBL/GenBank/DDBJ databases.
EMBL, BC036447, AMH36447.1; -.
GO; GO:0005622; C:intracellular; IEA.
GO; GO:0007242; P:intracellular signaling cascade; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     76992 MW; F13AABBF958947F5 CRC64;
                                                 01-0cT-2002 (TrEMBLrel. 22, Created)
01-0cT-2002 (TrEMBLrel. 22, Last sequence update)
01-0cT-2003 (TrEMBLrel. 24, Last annotation update)
Similar to rhophilin-like protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                134 LOLLKEELEELSGGVDPGRHGSEAVTVPMIPLGLKETKELDWSTPLKELISVHFGEDGAS 193
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                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (Human).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-2236.138; Pubmed=12473120; Mircescu H., Steuve S., Savonet V., Degraef C., Mellor H., Mircescu H., Steuve S., Savonet V., Degraef C., Mellor H., Dimont J.E., Maenhaut C., Pirson I.; Didentification and characterization of a novel activated RhoB bi protein containing a PDZ domain whose expression is specifically modulated in thyroid cells by cAMP."; EMBL; AJ347750; CAC87939-1; -. Genew; HGNC.19974; RHP2. Genew; HGNC.19974; RHP2. Golosope Colosope Colo
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33.3%; Score 1255; DB 4; Length 686;
Best Local Similarity 45.9%; Pred. No. 1.1e-81;
Matches 266; Conservative 107; Mismatches 196; Indels 10
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VSVNGQPCRWWRHAEVVTELKAAGEAGASLQVVSLLPSS 647
                             Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                            01-MAR-2003 (TrEWBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last seq
01-JUN-2003 (TrEMBLrel. 24, Last ann
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InterPro; IPR001478; PDZ.
InterPro; IPR000861; REM_repeat.
                                                                                                                                                                                         PRELIMINARY;
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SMART; SM00228; PDZ; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF03097; BRO1; 1.
Pfam; PF02185; HR1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   686 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                 P76RBE protein.
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STRAINGSTBL/66; TISSUB=Liver;

X MEDLINE=2108560; PubMed=11217851;

X MEDLINE=2108560; PubMed=11217851;

X MARA J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

X Mara J., Shinagawa A., Shibata K., Xiyoswa H., Adachi J., Fukuda S.,

A Azawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

A Alto T., Oƙazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,

X Salto T., Oƙazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,

X Adota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

X Radota K., Matsuda H.A., Ashburner M., Batalov S., Kochiwa H.,

X Radota K., Okido T., Furuno M., Nikaido I., Pesole G., Quackenbush J.,

Schriml L.M., Staubli F., Suzuki R., Tomite M., Wagner I., Washio T.,

A Sakai K., Okido T., Furuno M., Anon H., Baldarelli R., Barsh G.,

Brownstein M.J. Bult C., Fletcher C., Fujita M., Gariboldi M.,

Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

A Brownstein M.J., Bult C., Roffmann M., Hume D.A., Kamiya M., Lee N.H.,

Kondone P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,

Nordone P., Ring B., Ringwald M., Rodriguez I., Sakanoto N.,

Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

Nynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

A Havashizaki V.
439 LQKVLCAAQERSRLTYAQHQEEDDLLNLIDAPSVVAKTEQEVDIILPQFSKLTVTDFFQK 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               133
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                                                           LGPLSVFSAKNRWRLVGPVHLTRGEGGFGLTLRGDSPVLIAAVIPGSQAAAAGLKEGDYI
                                                                                                            74 GCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVRETVALELSYVNSN
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Functional annotation of a full-length mouse cDNA collection.";
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GO: GO: 0007242; P:intracellular signaling cascade; IEA.
InterPro; IPR004328; BRQ1.
InterPro; IPR001498; PDZ.
InterPro; IPR001498; PDZ.
InterPro; IPR010498; PDZ.
Pfam; PF02185; HRI; 1.
SWART; SM00288; PDZ; 1.
PROSITE; PSS0106; PDZ; 1.
SRQUENCE 686 AA; 76957 MW; BFEBEFB71D04F360 CRC64;
                                                                                                                                                                                                 609 VSVNGOPCRWWRHAEVVTELKAAGEAGASLOVVSLLPSS 647
                                                                                                                                                                                                                                           01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
1300002E07Rik protein.
RHPN2 OR D7ERTD784E OR 1300002E07RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        32.9%; Score 1242; DB 11;
46.1%; Pred. No. 9.7e-81;
tive 97; Mismatches 205;
                                                                                                                                                                                                                                                                                                                                                                                                                                                989
                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nature 409:685-690(2001).
EMBL; AKO04849; BAB23615.1; -.
MGD; MGI:1289234; Rhpn2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 datches 267; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
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SECURACE FORM N. 1.

SECURACE FORM N. 1.

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SECURAL EXPLOSE IN TISSUE LIVE;

MEDLINE 22354683; PubMed=12466851;

The FANTOM Consortium,

The FANTOM Consortium,

The RIKEN Genome Exploration Research Group Phase I & II Team;

The Analysis of the mouse transcriptome based on functional annotation of 6,770 full-length CDNAs.";

In Nature 420:563-573 (2002)

REMBL; AKOSO214; BAC34127.1; -...

MGD; MGI:1289234; Rhpn2.

RMCD; MGI:1289234; Rhpn2.

RMCD; GO:0007242; P:intracellular; IEA.

InterPro; IPR004328; BR01.

RITHERPO; IPR004328; BR01.

RITHERPO; IPR00861; REM_repeat.

PFam; PF03097; BR01; I.

RMCD FF03097; BR01; I.

RMCD FF03097; BR01; I.
                                                                                                                                                                                                                                                                                                                                                                     325 SICALEQLAMAQAQECVFEGLSPPASMAPQDCLAQLRLAQEAAQVAAEYRLVHRTWAQPP 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDG--SPATEGELPTHEQVFLQPPTSSK 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       304 VKENIPYSWASLACVKAHHYAALAHYFTAILLIDHQVKPGTDLD---HQEKCLSQLYDHM 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SLAKYAELDREDDFCEAAEAPDIQPKTHQKPEARMPRLSQGKGPDIFHRLGPLSVFSAKN 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RWRLVGPVHLTRGEGGFGLTLRGDSPVLLAAVIPGSQAAAAGLKEGDYIVSVNGQPCRWW 619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                66 NISVGVYQNTEEAFTIPLIPLGLKETKDVDFAVVLKDFILEHYSEDGYLYEDBIADLMDL
                                                                                                                                                        265 EKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFORAAGAFSLLRENFSHAPSPDMSAA
                                                                                                                                                                                                                                                                                246 MLSVLVKMMLAQAQESVFEKISLPG--IRNEFFMLVKVAQEAAKVGEVYQQLHAAMSQAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRG--PVLP-QELEERRQLGKAHLKRAILGQEEALRLHALCRVLREVDLLRAVISQTLQR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            145 SGGVDPGRHGSEAVTVPMIPLGLKETKELDWSTPLKELISVHFGEDGASYEAEIRELEAL
                                                                                                                        205 ROAMRIPSRNESGLELLTAYYNOLCFLDARFLIPARSLGLFFHWYDSLIGVPAQORALAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         76905 MW; 49B67AA361FEDC58 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-UNN-2003 (TrEMBLrel. 24, Last annotation update)
Similar to rhophilin-like protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
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SMART; SM00228; PDZ; 1.
PROSITE; PS50106; PDZ;
SEQUENCE 686 AA; 769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00595; PDZ; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RHPN2 OR D7ERTD784E.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QVFLQPPTSSKPRGPVLPQELE---ERRQLGKAHLKRAILGQEEALRLHALCRVLREVDL 488
                                                                             203
                                                                                                                                                                                                                                                                                                                                                                                        RLVHRTMAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDG--SPATEGELPTHE 431
                                                                                                                                        LRAVISQTLORSLAKYAELDREDDFCEAAEAPDIOPKTHOKPEARMPRLSQGKGPDIFHR
                                                   SHAPSPDMSAASLCALEQLMMAQAQECVFEGLSPPASMAPQDCLAQLRLAQEAAQVAAEY
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                   YEAETRELEALROAMRTPSRNESGLELLTAYYNOLCFLDARFLTPARSLGLFFHWYDSLT
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
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C TISSUB=Amygdala;

C Ottenwaelder B., Mewes H.M., Weil B., Wiemann S.;

A Ottenwaelder B., Mewes H.M., Weil B., Wiemann S.;

B GO, GO: 0005622; Cintracellular; IEA.

R GO, GO: 0007424; P: intracellular; IEA.

R GO, GO: 0007424; P: intracellular; IEA.

R InterPro; IPR004128; REM.

R InterPro; IPR001478; PEDZ.

R InterPro; IPR001478; PEDZ.

R Pfam; PF02189; HR1; 1.

R Pfam; PF02189; HR1; 1.

R SMART; SM00228; PDZ; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-0CT-2002 (TrEMBLrel 22, Last sequence update) 01-0TM-2003 (TrEMBLrel 24, Last annotation update) Expothetical protein (Fragment).
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PDZ; 1.
          685 AA;
 PS50106;
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 PROSITE;
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                                           GCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVRETVALELSYVNSN 133
                                                                                                                                                                                                                                                                                             488
                                                                                  134 LQLLKEELEELSGGVDPGRHGSEAVTVPMIPLGLKEITKELDWSTPLKELISVHFGEDGAS 193
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                                                                   83
                                                         374 RLVHRIMAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDG--SPATEGELPTHE
                                                                                                                                                                                                                                                                                        432 QVFLQPPTSSKPRGPVLPQELE---ERRQLGKAHLKRAILGQEEALRLHALCRVLREVDL
                                                                                                                                                                                                                                                                                                                                            YBABIRELBALRQAMRIPSRNESGLELLTAYYNQLCFLDARFLTPARSLGLFFHWYDSLT
                                                                                                                                                                  GVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQRAAGAFSLLRENF
                                                                                                                                                                                                                      489 LRAVISQTLORSLAKYAELDREDDFCEAAEAPDIOPKTHOKPEARMPRLSQGKGPDIFHR
                                                                                                                                                                                                                                                                                                                                                                       549 LGPLSVFSAKNRWRLVGPVHLTRGEGGFGLTLRGDSPVLIAAVIPGSQAAAAGLKEGDYI
                                                                                                                                                                                                                                                                                                                                                                                             499 IGPLSVFSASKRWSPPRGIDFTVEEGDLGFTLRGNTPVQVHFLDPHCSASLAGAKEGDYI
                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
NCBI_TaxID=9606;
                            10;
        Length 686;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
Burbelo P.D., Peck J.W., Oberst M.;
"Role of the Rho target, RL, in regulating the distribution
     ; Score 1228; DB 11; Length
; Pred. No. 9.8e-80;
97; Mismatches 207; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              actinin.",
Submitted (MAY-2000) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL, AF268032; AAKS8588.1; -
GO; GO:0005622; C:intracellular; IEA.
GO; GO:0007242; P:intracellular signaling cascade; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                609 VSVNGQPCRWWRHAEVVTELKAAGEAGASLQVVSLLPSS 647
                                                                                                                                                                                                                                                                                                                                                                                                                            01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-UUN-2003 (TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       685 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR004328; BR01.
InterPro; IPR001478; PDZ.
InterPro; IPR000861; REM_repeat.
Pfam; PF03097; BR01; 1.
Pfam; PF02185; HR1; 1.
SMART; SM00228; PDZ; 1.
     32.5%;
                        Matches 265; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rhophilin-like protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (Human)
              Local Similarity
                                            74
                                                                                                      84
                                                                                                                           194
                                                                                                                                                                   254
     Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       134 LQLLKEELEELSGGVDPGRHGSEAVTVPMIPLGLKETKELDWSTPLKELISVHFGEDGAS 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --GELPTHEOVFLOPPTSSKPRGPVLPQELEERRQLGKA-----HLKRAILGQEEALRL 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 486 FSKLIVTDFFQKLGPLSAFSANKRWTAPRSIRFTAEEGDLGFTLRGNAPVQVHFLDPYCS 545
                                                                                                                                                                                                                                                                                                                                                                                                                       24 GCNPLAQTGRSKLQNQRAALNQQILKAVRMRTGAENLLKVATNSKVQEQVRLELSFVNSD 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YRLVHRIMAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDG--SPATE----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         477 HALCRVLREVDLLRAVISQTLQRSLAKYAELDREDDFCEAAEAPDIQPKTHQKPEARMPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  :||: || :::||: |: :||: :|| ||: :|| ||: :|| ||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :|: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :|: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :|: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :||: :|
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      254 GVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQRAAGAFSLLR-EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PSHAPSPDMSAASLCALEQLMMAQAQECVFEGLSPPASMAPQDCLAQLRLAQEAAQVAAE
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                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            597 AAAAGLKEGDYIVSVNGQPCRWWRHAEVVTELKAAGEAGASLQVVSLLPSS 647
                                                                                                                                                                                                                                                      35;
                                                                                                                                 Length 685;
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Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cch 31.4%; Score 1185.5; DB 4; Length al Similarity 44.2%; Pred. No. 1.1e-76; 261; Conservative 101; Mismatches 194; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Edwards K.A., Kaneshiro K., Yamamoto D.;
"Mutations in the Drosophila Rhophilin gene at 13E.";
submitted (FEB-1999) to the EMBL/GenBank/DDBJ databases.
-! SIMILARITY: CONTAINS 1 PDZ/DHR DOMAIN.
EMBL; AF132025; AAD31273.1;
-! FlyBase; FBGN0026374; Rhp.
GO; GO:0005422; C:intracellular; IEA.
GO; GO:0007421; P:intracellular signaling cascade; IEA.
InterPro; IPR004328; BRO1.
9787BE83BC76318D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ā
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FROM N.A.

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KEATANI-BERKELEY;
RAM REDLINE-20196006; PubMed=10731132;
RADAMEN NO. Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
Adamatides P.G., Scherer S.E., Holt R.A., Evans C.A., Galle R.F.,
RAM George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
Sutton G.G., Wortnan J.R., Yandell M.D., Zhang Q., Chen L.X.,
RAM Brandon R.C., Rogers Y.-H.C., Blazel R.G., Champe M., Pfelifer B.D.,
RAM MELL, Doyle C., Baxter E.G., Helf G., Nelson C.R., Miklos G.L.G,
RAM Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
RAM Ballew R.M., Basun A., Bauck J., Brokstein P., Beasley B.M.,
Berkova D., Botchan M.R., Beuck J., Brokstein P., Ecther A., Chandra I.,
RAM George R.C., Derman B.P., Brandari D., Bolahakov S.,
RAM George R., Downes M., Dugal-Rocha S., Dunkov B.C., Dunn P.,
RAM Georgen C., Gabrielian A.E., Downes M., Dugal-Rocha S., Dunkov B.C., Dunn P.,
RAM Georgen C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K.,
ROGOR K., Doug L.E., Downes M. J., Herrandez J.R., Houck J.,
RAM Harris M.L., Harvy D., Hamman T.G., Herrandez J.R., Houck J.,
RAM Harris M.L., Havya D., Hamman T.G., Wei M.-H., Ibegwam C.,
Alali M., Kalush F., Karpen G.H., Ke Z., Kulp D., Lai Z.,
Liu X., Mattei B., McIntoen G.H., Ke Z., Kulp D., Lai Z.,
Alali M., Kalush F., Karpen G.H., Ke Z., Kulp D., Lai Z.,
Liu X., Mattei B., McIntoen T.C., Morris J., Moshrefi A.,
Reinert K., Remington K.A., Nixon X., Nusskern D.R., Pacleb J.M.,
Reinert K., Remington K., Simpson M., Strong R., Sun B.,
Reinert K., Remington K., Stapleton M., Strong R., Sun B.,
Reinert K., Remington K., Stapleton M., Strong R., Sun B.,
Reinert K., Remington M., Strong R., Wang R.H., Wang X.,
Russkan R., Jenes R., Tector C., Truner R., Venter E., Wang R., Wang R.-Y., Wassarman D.A., Wainstood M.W., Wang S.-Y., Sunders R.M., Woodage T., Simpson M., Strong R., Sun B.,
Russkan R., Long F.N., Zhong F., Zhon M., Zhong S., Zho S., Shu P.,
Russkan R., House R.M., Nixon K., Wun S., Sun B.,
Russkan R.M., Woodage T., Simpson M., Strong R., Sun B.,
Russkan R.M., Woodage T., W
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
              Neoptera; Endopterygota; Diptera; Brachycera; Muscomorphā;
Ephydroidea; Drosophilidae; Drosophila
                                                      NCBI_TaxID=7227;
  17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      113
                                                                                                                                                                                                                                                                                                                                                                                                                            233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            509 REDDFCEAAEAPDIQPKTHQKPEARMPRLSQGKGPDIFHRLGPLSVFSAKNRWRLVGPVH 568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                536
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           537 LOKGSSLYHSVPSNDNKCPLDNDDDEEHDGGYNLYKEEFENFGFHVRGDAPVIIAHVEIN 596
                                                                                                                                                                                                                                                                                                                                                  114 TSNNRVRETVALELSYVNSNLQLLKEELEELSGGVDPGRHGSEAVTVPMIPLGLKETKEL 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                    RFLIPPARSLGLFFHWYDSLIGVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGAR 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      254 LAVDSFLRAAGVFRHIYDTFTNAPSMDLKPQVLDVLVSLMLSQARECLFEKLQLQIEAMS 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  :: | |: | | 374 RSI----DATD-ELKASK-----SSQKNQESFIGNSQEVERITTADYGASDEASTSIA 421
                                                                                                                                                                                                                                                                                                              73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RRPVLLGPRGLLRSQREHGCKT--PASTWASPRPLLNWSRKAQQGKTGGCPQPCAPV 709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   K----GSLSTLSAASSGISSGFPSPASTSIAAKPKLHL-----KTSSSSRPAGSV 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----FGLTLRGDSPVLIAAVIPG
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                                                                                                                                                                                                                                                                                                                                                                      DWSTPLKELISVHFGEDGASYEAEIRELEALRQAMRTPSRNESGLELLTAYYNQLCFLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                294 RAMEAFORAAGAFSLLRENFSHAPSPDMSAASLCALEQLWMAQAQECVFEGLSPPASMAP
                                                                                                                                                                                                                                                                      RGEDPVRVHVGPMNPQLHAVGCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRA
                                                                                                                                                                                                                                                                                                            33 RGSDP------RAATCRS-----KLONRRCKLNKEINKELRIRAGAENLYKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              354 QDCLAQLRLAQEAAQVAAEYRLVHRTMAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      414 MALCDGSPATEGELPTHEQVFLQPPTSSKPRGPVLPQELEERR----QLGK-----
                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                            tch al Similarity 35.0%; Pred. No. 6e-65; 251; Conservative 122; Mismatches 234; Indels 110;
                                                              Pfam; PF02185; HR1; 1.
Pfam; PF00595; PDZ; 1.
SMART; SM00074; HR1; 1.
SMART; SM02078; PDZ; 1.
PROSTIR: PS50106; PDZ; 1.
SEQUENCE 718 AA; 80826 MW; AF9DD0C57132AA31 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        --EGG--
                          ; IPR000861; REM_repeat
                                            Pfam; PF03097; BRO1; 1.
        InterPro; IPR001478;
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Best Local &
                            InterPro
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ENGUENCE FROM: A.A.

Celniker S.E., Adams M.D., Kronmiller B., Wan K.H., Holt R.A.,

Barson J.A., Adams M.D., Amanatides P.G., Brandon R.C., Rogers Y.,

Barson J., An H., Baldwin D., Barzon J., Beeson K.Y., Busam D.A.,

Carlson J.W., Center A., Champe M., Davenport L.B., Dietz S.M.,

Carlson J.W., Center V., Doup L.E., Doyle C., Dresnek D., Farfan D.,

Reriera S., Frise E., Galle R.F., Garge N.B., George K.A.,

Gonzalez M., Houck J., Hoskins R.A., Hostin D., Howland T.J.,

Ibegwam C., Jalali M., Kruse D., Li P., Mattei B., Moshrefi A.,

McIncosh T.C., Moy M., Murphy B., Nelson C., Nelson K.A., Nunco J.,

Racleb J., Paragas V., Park S., Patel S., Feiffer B.,

Pacleb J., Paragas V., Park S., Patel S., Feiffer B.,

Rybounchavong S., Pitman G.S., Puri V., Richards S., Scheeler F.,

Williams S.M., Strong R., Svirskas R., Tector C., Tyler D.,

Sequencing of Drosophila melanogaster genome.",

Sequencing of Drosophila melanogaster genome.",

Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Misra S., Crosby M.A., Matthews B.B., Bayraktaroglu L., Campbell K. Hradecky P., Huang Y., Kaminker J.S., Prochnik S.E., Smith C.D., Tupy J.L., Bergman C., Berman B., Carlson J.W., Celniker S.E., Clamp M., Drysdale R., Emmert D., Frise B., de Grey A., Harris N., Kronmiller B., Marshall B., Millburn G., Richter J., Russo S., Searle S.M., Smith E., Shu S., Smutniak F., Whitfield E., Shuburner M., Gelbart W.M., Rubin G.M., Mungall C.J., Lewis S.E., "Annotation of Drosophila melanogaster genome.",
Science 287:2185-2195(2000).
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                                                                       [2]
SEQUENCE FROM N.A.
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Last sequence update)
Last annotation update)

Drosophila melanogaster (Fruit fly)

CG8497 protein. RHP OR CG8497.

Created)

01-MAY-2000 (TrEMBLrel. 13, 01-OCT-2002 (TrEMBLrel. 22, 01-OCT-2003 (TrEMBLrel. 25,

PRELIMINARY;

09VXP2; Q9VXP2

RESULT 13

Q9VXP2

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   114 TSNNRVRETVALELSYVNSNLQLLKEELEELSGGVDPGRHGSEAVTVPMIPLGLKETKEL 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                174 DWSTPLKELISVHFGEDGASYEAEIRELEALRQAMRTPSRNESGLELLTAYYNQLCFLDA 233
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          294 RAMEAFORAAGAFSLLRENFSHAPSPDMSAASLCALEQLMMAQAQECVFEGLSPPASMAP 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ---AHLKRAILGQEEALRLHALCRVLRE----VDLLRAVISQTLQRSLAKY----AELD 508
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    450 EDGDLLERS----VEASSKFTLSLTGPDFTSHKVKDPFKRLGPIAIFSARRHWTAPRCVR 505
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       414 MALCDGSPATEGELPTHEQVFLQPPTSSKPRGPVLPQELEERR----QLGK-----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels 141; Gaps
                                                                                        S.E., Gibbs R.A., Rubin G.M., Venter C.J., to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tch 23.5%; Score 887.5; DB 5; Length 687; al Similarity 31.8%; Pred. No. 3.2e-55; 228; Conservative 120; Mismatches 228; Indels 141.
   to the EMBL/GenBank/DDBJ databases
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EMBL, AB003500; AAF48516.2; -.
Flybase; FBGn005574; Rhp.
GO; GO:000742; P:intracellular signaling cascade; IEA.
InterPro; IPR004328; BRO1.
InterPro; IPR001478; PDZ.
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Pfam; PF00595; PDZ; 1.
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PROSITE; PS50106; PDZ;
                                                                                        Adams M.D., Celniker
Submitted (MAR-2000)
Submitted (MAR-2000)
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Matches 228; Conserv
                                                                                                                                                                                 SEQUENCE FROM N.A.
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A Ninomiya K., Wagatsuma M., Kanda K., Kondo H., Yokoi T., Kodaira H., A Buruya T., Takahashi M., Kikkawa E., Omura Y., Abe K., Kamihara K., Rutuya T., Takahashi M., Kikkawa E., Omura Y., Abe K., Kamihara K., Ratsuta N., Sato K., Tanikawa M., Yamazaki M., Sajuyama T., Irie R., Otsuki T., Sato H., Wakamatsu A., Ishii S., Yamamoto J., Isono Y., Kawai-Hio Y., Saito K., Nishikawa T., Kimura K., Yamashita H., Matsuo K., Nakamura Y., Sekine M., Kikuchi H., Murakawa K., Kanehori K., Takahashi-Fujii A., Oshima A., Sugiyama A., Kawakami B., Suzuki Y., Sugano S., Nagahari K., Masuho Y., Nagai K., Isogai T.; Submitted (JUI-2002) to the EMBL/GenBank/DDBJ databases.

EMBL, AKO95001, BAC04411.1; -..

ROJ GO:001242; Pintracellular signaling cascade; IEA.

RICEPPO: IPRO01478; PDZ.

R Hypothetical protein.

R SEQUENCE 298 AA; 33380 WW; B62E0B8B2DEA00F5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               513 FCBAAEAPDIQPKTHQKPBARMPRLSQGKGPDIFHRLGPLSVFSAKNRWRLVGPVHLTRG 572
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               453 EERROLGKAHLKRAILGQEBALRLHALCRVLREVDLLRAVISQTLQRSLAKYAELDREDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10.4%; Score 394; DB 4; Length 298; 40.9%; Pred. No. 3.2e-20; Live 41; Mismatches 77; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=20277482; PubMed=10819331;
Nagase T., Kikuno R., Ishikawa K., Hirosawa M., Ohara O.;
"Prediction of the coding sequences of unidentified human
                                                              (TrEMBLrel. 22, Created)
(TrEMBLrel. 22, Last sequence update)
(TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Hypothetical protein KIAA1471 (Fragment).
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                                                                                                                   Hypothetical protein FLJ37682.
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                               PRELIMINARY;
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                                                                                                                                      Human).
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                                                                                                                                                                                                                                    TISSUE=Hippocampus;
                                                                                                                                                                                                                      SEQUENCE FROM N.A.
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                                                                                                                                                                                 NCBI_TaxID=9606;
                                                               01-OCT-2002 (
01-OCT-2002 (
01-JUN-2003 (
                                                                                                                                    Homo sapiens
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                                               Q8N9D6
                               Q8N9D6
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RESULT 14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | : : | | | | | | | | 374 IL----AKGQPDTVQDALRFTMDVIGGXYNSAKKDNDFIYHEAVPALDTLQPVKGAPLVK 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       183 ISVHFGEDGASYEAEIRELEALRQ-AMRTPSRNESGLELLTAYYNQLCFLDARF-LTPAR 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            418 DGSPATEGELPTHEQVFLQPPTSSKPRGPVLPQELEERRQLGK--AHLKRAILGQEEALR 475
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genes.XVII.The complete sequences of 100 new cDNA clones from brain

"Mich code for large proteins in vitro.";

DNA Res. 7:143-150(2000).

EMBL; AB040904; BAA95995.2; -.

RISSP; O66124; 2SHP.

RGO; GO:0004705; F:protein tyrosine phosphatase activity; IEA.

GO; GO:0006470; P:protein amino acid dephosphorylation; IEA.

RGO; GO:0007165; P:signal transduction; IEA.

RGO; GO:0007165; P:protein amino acid dephosphorylation; IEA.

RGO; GO:0007165; P:protein amino acid dephosphor
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10.3%; Score 387; DB 4; Length 1421;
Best Local Similarity 28.2%; Pred. No. 9.7e-19;
Matches 127; Conservative 75; Mismatches 172; Indels 76; Gaps
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Search completed: July 13, 2004, 12:06:55 Job time : 87 secs

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GenCore version 5.1.6
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sw model - protein search, using OM protein

July 13, 2004, 12:02:51; Search time 30 Seconds (without alignments) 1244.186 Million cell updates/sec Run on:

US-10-697-266-2

3774

1 MILEERPDGAGAGEESPRLQ.....QPCAEVKPAPPSSLKHPGWP 723 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

389414 segs, 51625971 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database

Issued Patents AA:*
1: /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/2/iaa/PCTUG_COMB.pep:*
6: /cgn2_6/ptodata/2/iaa/PCTUG_COMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

+ 1		eko (SUMMARIES		
No.	Score	Query Match	Length	DB	ID	Description	
н	3774	100.0	723	4	US-09-849-334-2	Sequence 2. Appli	
7	3774	100.0	723	4	US-10-274-878-2	0	
М	2331	61.8	634	4	-334-	4	
4	2331	61.8	634	4	10-274-	4	
IJ	268	7.1	921	4	09-800-729-19	Sequence 199. App	
9	9	•	868	4	US-09-800-729-106	Sequence 106. App	
7	155.5	4.1	942	4	US-08-685-852-3	Segmence 3. Appli	
89	134.5	3.6	S	7	US-08-665-037-2	Sequence 2. Appli	
6		3.6	450	7	0-999-80	Semence 2. Appli	
70 10	134.5	•	450	~	US-08-732-870-2	Semience 2. Appli	
11	134	3.6	1266	4	09-25	Semience 30851	
12	131.5	3.5	2293	m	09-368-590-2	Sequence 2. Appli	
13	12	3.4	751	4	US-09-252-991A-27424	27	
14	128.5	3.4	658	4	US-09-252-991A-18483	18483	
15	128	3.4	864	4	096-2		
16	125.5	3.3	635	4	US-09-252-991A-18485	Semience 18485 A	
17	123.5	3.3	1792	4	561-818A-4		
18	123.5	•	1800	4	1		
19	123.5	•	1816	4	US-09-561-818A-2		
20	123.5	3.3	1824	4	US-09-561-818A-6	Sequence 6, Appli	
21	123	•	609	4	US-09-252-991A-24893		
22	123	•	643	4	US-09-252-991A-22490		
23	122	•	358	4	US-09-740-027-4	4	
24	•	•	729	4	US-09-252-991A-22350	22.	
25	120	•	99	4,	US-09-858-664A-2		
26	120	•	1665	4	US-10-274-978-2	7	
27	120	3.5	60	m	US-09-144-085-2		

Sequence 34, Appl	Sequence 34, Appl	Sequence 34, Appl	Sequence 10, Appl	Sequence 10, Appl	10,	Sequence 15, Appl	Sequence 15, Appl	2. 4	. 2	246		12	8	Segmence 31243. A	Seguence 76. Appl	1	Sequence 1, Appli
US-09-124-238A-34	US-09-721-975-34	US-09-986-621-34	US-09-124-238A-10	US-09-721-975-10	US-09-986-621-10	US-09-651-656-15	US-09-650-855-15	US-08-015-986A-2	US-08-446-363-2	US-09-252-991A-24630	US-09-045-632-50	US-08-851-567B-12	US-09-817-514A-8	US-09-252-991A-31243	US-09-976-594-76	US-09-124-238A-1	US-09-721-975-1
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223	223	223	457	457	457	819	819	1445	1445	343	1050	2504	2504	629	1739	457	457
3.2	3.5	3.5	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
119.5	119.5	119.5	119.5	119.5	119.5	119.5	119.5	118	118	117.5	117.5	117.5	117.5	117	116.5	116	116
28	29	30	37	32	33	34	35	36	37	8	6	0	11	7	13	4	5

ALIGNMENTS

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PATENT NO. 650655

GENERAL INFORMATION:
TITLE OF INVENTION: 180LATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES
TITLE OF INVENTION: THEREOF
FILE REFERENCE: CL001099-CIP
CURRENT APPLICATION NUMBER: US/09/849,334
CURRENT APPLICATION NOWHER: 2011-05-07
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VHVGPMNPQLHAVGCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVR 120
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100.0%; Score 3774;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 723; Conservative 0; Mismatches
                                   Sequence 2, Application US/09849334
Patent No. 6500655
                                                                                                                                                                                                                                                                             ; TYPE: PRT
; ORGANISM: Human
US-09-849-334-2
                                                                                                                                                                                                                                SEQ ID NO 2
RESULT 1
US-09-849-334-2
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APPLICANT: RUSCH, Douglas et al TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, AND USES TITLE OF INVENTION: THEREOF FILE REPERENCE: CLOOL099-CIP CURRENT APPLICATION NUMBER: US/09/849,334
CURRENT APPLICATION NUMBER: US/09/849,334
CURRENT PILING DATE: 2001-05-07
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FASELSEQ for Windows Version 4.0
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241 SLGLFFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQ 300
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                                                                                       RLAQEAAQVAAEYRLVHRTMAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDGS
                               RAAGAFSLIRENFSHAPSPDMSAASLCALEQLMMAQAQECVFEGLSPPASMAPQDCLAQL
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67.0%; Pred. No. 3.3e-210;
iive 49; Mismatches 112;
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; Patent No. 6500655
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Matches 473; Conservative
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US-09-849-334-4
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US-09-849-334-4
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; Sequence 2, Application US/10274878
; Sequence 2, Application US/10274878
; Patent No. 6670163
; GENERAL INFORMATION:
; APPLICANT: RUSCH, Douglas et al.
; TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
; TITLE OF INVENTION: THEREOF
; TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES
; TITLE OF INVENTION: THEREOF
; FILE REFERENCE: C1001099-C1P-DV
; CURRENT APPLICATION NUMBER: US/10/274,878
; PRIOR FILING DATE: 2002-10-22
; PRIOR PAPLICATION NUMBER: 09/499,334
; PRIOR FILING DATE: 2001-05-07
; PRIOR FILING DATE: 2001-05-07
; RIOR FILING DATE: 2001-05-07
; NUMBER OF SEQ ID NOS: 4
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                                                   PATEGELPTHEQVFLQPPTSSKPRGPVLPQELEERRQLGKAHLKRAILGGEBALRLHALC
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ORGANISM: Human
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LENGTH: 723
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US-10-274-878-2
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OTHER INFORMATION: Kaa equals any of the naturally occurring L-amino acids
NAME/KEY: SITE
   ETVALELSYVNSNLQLLKEELAELSTSVDVDQPEGEGITIPMIPLGLKETKELDWATPLK 134
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                                                                241 SLGLFFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQ
                                                                                                                                                     195 SPGLLFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDCSCTEGTNHAAEAFO
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                                        ELISVHFGEDGASYEAEIRELEALRQAMRTPSRNESGLELLTAYYNQLCFLDARFLTPAR
                                                                                                                                                                                        RAAGAFSLIRENFSHAPSPDMSAASLCALEQLMMAQAQECVFEGLSPPASMAPQDCLAQL
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APPLICANT: Ni et al.
TILLE OF INVENTION:
FILE REFERENCE: PZ044P1
CURRENT APPLICATION NUMBER: US/09/800,729
CURRENT APPLICATION NUMBER: US/09/800,729
PRIOR FILING DATE: 2001-03-08
PRIOR FILING DATE: 2000-09-22
PRIOR FILING DATE: 1999-09-24
PRIOR FILING DATE: 1999-09-24
NUMBER OF SEQ ID NOS: 217
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Patent No. 6605592
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Best Local Similarity
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APPLICANT: RUSCH, Douglas et al
APPLICANT: RUSCH, Douglas et al
TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES
TITLE OF INVENTION: THEREOF
TITLE OF INVENTION: THEREOF
TITLE OF INVENTION: THEREOF
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES
TITLE OF INVENTION: THEREOF
TITLE OF INVENTION: THEREOF
CURRENT FILING DATE: 2002-10-22
PRIOR APPLICATION NUMBER: 09/49,334
PRIOR APPLICATION NUMBER: 09/73,371
PRIOR FILING DATE: 2001-02-01
NUMBER OF SEQ ID NOS: 4
SOFTWARE: ReatSEQ for Windows Version 4.0
SEQ ID NO 4
LENGTH: 634
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                                  SLGLFFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQ 300
                                                              195 SPGLLFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDCSCTECTNHAAEAFQ 254
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                                                                                                                                                                                                                                                                                                                                                           61.8%; Score 2331; DB 4; Length 634; 67.0%; Pred. No. 3.3e-210;
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Sequence 4, Application US/10274878
Patent No. 6670163
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Best Local Similarity 67.0
Matches 473; Conservative
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ORGANISM: Mus musculus
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                                                                                                                                                        495 QTLQRSLAKYAELDREDDFCEAAEAPDIQ-----PKTHQKPEARMPRLSQGKGPDIFHR 548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     302 DKINRAL---XAAKKDNDFIYHDRVPDLKDLDPIGKATLVKSTPVNVPISQ-KFTDLFEK 357
                                                                        FNIGALHTQIGARQDRSCTEGARRAMEAFQRAAGAFSLLREN----FSHAPSPDMSAASL 326
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                                                                                                                                                                                                                                                                                                                                                                                            447 VLPQELEERRQLGKAHLKRAILGQEEALRLHALCRVLREVDLLRAV-------IS 494
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5 ISVQLKKTSEVDLAKPLVKFIQQTYPSGGEEQAQYCRAAEELSKLRRAAVGRPLDKHEGA 64
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                                           LELLTAYYNOLCFLDARFLTPARSLGLFFHWYD-----SLTG--VPAQQRALAFEKGSVL
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APPLICANT: ONO, YOSHITAKA
APPLICANT: ONO, YOSHITAKA
APPLICANT: INAWATSU, AKIHIRO
TITLE OF INVENTION: WODIFIED PROTEIN DERIVED FROM PROTEIN KINASE 1
FILE REFERENCE: 016897/0844
CURRENT APPLICATION UNMERE: US)08/685,852
CURRENT FILING DATE: 1996-07-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 942;
                                                                                                                                                                                                                                                                                                                                                   DILLP-----KEVFPVLAAKHCIM------QANAEYHQSI----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
4.1%; Score 155.5; DB 4;
Best Local Similarity 21.4%; Pred. No. 2.5e-05;
Matches 159; Conservative 76; Mismatches 260;
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PRIOR APPLICATION NUMBER: JP 7-262552

PRIOR FILING DATE: 1995-09-14

PRIOR FILING DATE: 1995-09-14

PRIOR FILING DATE: 1995-12-05

PRIOR FILING DATE: 1996-03-08

PRIOR FILING DATE: 1996-03-08

PRIOR FILING DATE: 1996-04-11

NUMBER OF SEQ ID NOS: 6

SOFTWARE: PATCHIN VET: 2.1

SOFTWARE: PATCHIN VET: 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3, Application US/08685852; Patent No. 6660837; GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   : |:||
358 MVPVSV 363
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                                                                                                                                                               NAME/KEY: SITE. COCATION: (309)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids US-09-800-729-106
                                                                                                                                                                                                                                                                                                             HAPSPDMSAASLCALEQLMMAQAQECVFEGLSPPASMAPQDCLAQLRLAQEAAQVAAEYR 374
                                                                                                                                                                                                                                                                                                                                                                                               375 LVHRIMAQPPVHDYVPVSWIALVHVKAEYFRSLAHYHVAMALCDGSPAIEGELPTHEQVF 434
                                                                                                                                                                                                                                                                                                                                                                                                                                          ------QANAEYHQSI- 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     435 LQPPTSSKPRGPVLPQELEERRQLGKAHLKRAILGQEEALRLHALCRVLREVDLLRAV-- 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ------LAKOOKK---FGEEIARLOHA-----AELIKTVAS 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----ISQTLQRSLAKYAELDREDDFCEAAEAPDIQ-----PKTHQKPEARMPR 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Xaa equals any of the naturally occurring L-amino acids
                                               152 RHGSEA-VTVPMIPLGLKETKELDWSTPLKELISVHF---GEDGASYEAEIRELEALRQA 207
                                                                                        RTAAEALIMATFISVQLKKTSEVDLAKPLVKFIQQTYPSGGEEQAQYCRAAEELSKLRRA 105
                                                                                                                                    M--RIPSRNESGLELLIAYYNQLCFLDARFLIPARSLGLFFHWYD----SLTG--VPAQ 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     343 RYDEYVNVKDFSDKINRAL---XAAKKDNDFIYHDRVPDLKDLDPIGKATLVKSTPVNVP 399
                                                                                                                                                                                                                        ORALAFEKGSVLFNIGALHTQIGARODRSCTEGARRAMEAFQRAAGAFSLLREN----FS
    Gaps
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  59; Mismatches 160; Indels 102;
                                                                                                                                                                                                                                                                                                                                                                                                                               277 -FGDAFKQCQYKDTLP------KEVFPVLAAKHCIM-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: 32 Human secreted proteins; TITLE OF INVENTION: 32 Human secreted proteins; FILE REFERENCE: P2044P1; CURRENT APPLICATION NUMBER: US/09/800,729; CURRENT FILING DATE: 2001-03-08; PRIOR PILING DATE: 2000-09-22; PRIOR FILING DATE: 1999-09-24; NUMBER OF SEQ ID NOS: 217; SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 106, Application US/09800729
Patent No. 6605592
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LSQGKGPDIFHRLGPLSV 554
      117; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION: (194)
OTHER INFORMATION:
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US-09-800-729-106
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SEQ ID NO 106
LENGTH: 868
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297 SGLHLSPTAAEARRRLEPCESTSARHRWTGTGSVKSSATSEPLPACLGTLGPLPHGPWAS 356
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  486 VDLLRAVISQTLQRSLAKYAELD----REDDFCEAAEAPDIQPKTHQKPEARMPRLSQGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VIPGSQAAAAGLKEGDYIVSVNGQPCRWWRHAEVVTELKAAGEAGASLQVV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels 125;
                                                                                                                                                                                                                                                                                                                                                                                                          3.6%; Score 134.5; DB 2; Length 450; 14.6%; Pred. No. 0.00071;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      21; Mismatches 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DIAGNOSIS AND TREATMENT OF TKA-1 RELATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STAID:
COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
"TYPE: storage
                         FILING DATE: OCCODER 13, 1995
ATTORNEY ACSUN INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERNCE/DOCKET NUMBER: 220/156
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 955-0440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2, Application US/08666067
Patent No. 592842
GENERAL INFORMATION:
APPLICANT: Seedorf, Klaus
APPLICANT: Ullrich, Axel
TITLE OF INVENTION: DISORDERS
TITLE OF INVENTION: DISORDERS
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        658 --VLLGPRGLLRSQREHGCKT--
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STREET: 633 West Fifth Street
STREET: Suite 4700
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SYSTEM: IBM P.C.
Word Perfect 5.1
                                                                                                                                                                                                    TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS: LENGTH: 450 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                               24.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 24.69
Matches 84; Conservative
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                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: protein
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California
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SOFTWARE: Word Pe
                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
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US-08-666-067-2
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CITY: LC
STATE: (
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----GAGGPTCSAINLSRVAGLEKQLAIELKVKQGAENMIQTYSNGSTKDRKLLLTAQQM 169
                                           -----GVPAQQRALAFEKGSVLFNIGALHTQIGA---- 282
                                                                                       ----LQDSKTKIDIIRMQLRRALQAGQLENQAAPDDTQGSP--DLGAVELRIEELRHHF 222
                                                                                                                                                                          -----LSAAKAPDRKAVSEAQEKLIESNQKLGLLR 268
                                                                                                                                                                                                                    EGLSPPASMAPQDCLAQLRLAQEAAQVAAEYRLVHRTMAQPPVHDY----VPVSWTALVH 398
                                                                                                                                                                                                                                                           269 BALERRIGELPAD-HPKGRLLREELAAASSAAFSTRLAGPFPATHYSTLCKPAPLTGTLE 327
                                                                                                                                                                                                                                                                                                                                                                                                   ----TSSKPRGP-----VLPQELEERRQLGKAHLKRAILGQ 470
                                                                                                                                                                                                                                                                                                                                                                                                                                             382 KAEAENTSEVSTVLKLDNTVVGQTSWKPCGPNAWDQSFTLELERARE----LELAVFWR 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BEALRLHALC--RVLREVDLLRAVISQTLQRSLAKYAELDREDDFCEAAEAPDIQPKTHQ 528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DQ----RGLCALKFLKLEDFL-----DNERHEVQLDMEPQGCLVAEV----TFR 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        478 NPVIERIPRLRROKKIFSKOOGKA---FORAROMNIDVA--TW-----VRLLRRLIPNAT 527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GEGGFGLTLRGDSPVLIAAVIPGSQAAAAGLKEGDYIVSVNGQPCRWWRHAEVVTELKAA 631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         632 GEAGASLOVVSLLPSSRLPSLGDRRPVLLGPRGLLRSQREHGCKTPASTWASPRPLLNWS 691
                                                                                                                               RQDRSCTEGARRAMEAFQRAAGAFSLLRENFSHAPSPDMSAASLCALEQLMMAQAQECVF
                                                                                                                                                                                                                                                                                                                                          529 KPE-ARMPRL-----SQGKGPDIFHRLGPLSVFSAKNRWRLVGPVHLTR-----
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                                                                                                                                                                                                                                                                                                            399 VKAEYFRSLAH---YHVAMALCDGSPATEGELPTHEQVFLQPP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2, Application US/08665037

Patent No. 5895813

GENERAL INFORMATION:
APPLICANT: Ullrich, Axel
TITLE OF INVENTION: DIAGNOSIS AND TREATMENT
TITLE OF INVENTION: DIAGNOSIS AND TREATMENT
TITLE OF INVENTION: DISORDERS
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 90071-2066
COMPUTER READBALE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM COMPATIBLE OPERATING SYSTEM: IBM P.C. DOS 5.0 SOFTWARE: Word Perfect 5.1
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FLASSIFICATION: 530
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   557 TDSDSSPQKSSRDPPSSPSSLSS--PI
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STREET: 633 West Fifth Street
STREET: Suite 4700
                                                                                                                                                               | : : | | | : : RVEHAVAEGAKNVLRL-----
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CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
                                           243 GLFFHWYDSLT-
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TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      72 VQRIKAVEGQT--RLLVVDQETDEELRRRQLTCTEEMAQRGLPPAHDPWEPK----- 121
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --SLGDRRP--- 657
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      591 VIPGSQAAAAGLKEGDYIVSVNGQPCRWWRHAEVVTELKAAGEAGASLQVV----
                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 3.6%; Score 134.5; DB 2; Length 450; Best Local Similarity 24.6%; Pred. No. 0.00071; Matches 84; Conservative 21; Mismatches 111; Indels 125;
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DIAGNOSIS AND TREATMENT
OF TXA-1 RELATED
DISORDERS
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COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
APPLICATION NUMBER: US/08/666,067
FILING DATE: June 13, 1996
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/055,421
FILING DATE: October 13, 1995
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 220/157
REPERENCE/DOCKET NUMBER: 220/157
TELEPHONE: (213) 955-0440
TELEPAX: (213) 955-0440
TELEFAX: 67-3510
INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS:
LENGTH: 450 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  658 --VLLGPRGLLRSQREHGCKT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 2, Application US/08732870 Patent No. 5945523 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                               : 450 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Ullrich, Axe.
APPLICANT: Seedorf, Luli
TITLE OF INVENTION: DIA
TITLE OF INVENTION: DES
TITLE OF INVENTION: DIS
TITLE OF SEQUENCES: 2
CORRESPONDENCE ADDRESS: ADDRESSER: LYON & LYON
                                                                                                                                                                                                                                                                                                                                              , MOLECULE TYPE: protein US-08-666-067-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                   linear
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US-08-732-870-2
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APPLICANT: Marc J. Rubenfield et al.
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REPERENCE: 107196.138
CURRENT APPLICATION NUMBER: US/09/252,991A
PRIOR APPLICATION DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  542 GPDIFHRLGPLSVFSAKNRWRLVGPV-----HLTRGEGGFGLTLRGDSP---VLIAA 590
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; Score 134.5; DB 2;
; Pred. No. 0.00071;
21; Mismatches 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        658 --VLLGPRGLLRSQREHGCKT------
                                                                                                                                                                           APPLICATION NUMBER: 08/666,037
FILING DATE: June 13, 1996
APPLICATION NUMBER: 08/666,067
FILING DATE: June 13, 1996
APPLICATION NUMBER: 60/005,167
FILING DATE: October 13, 1995
APPLICATION NUMBER: 60/005,421
FILING DATE: October 13, 1995
ATTORNEY/AGENT INFORMATION:
NAME: Wardurg, Richard J.
RESTRATION NUMBER: 32,327
RESTRENCE/DOCKET NUMBER: 222/247
TELECOMMUNICATION NUMBER: 222/247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 30851, Application US/09252991A Patent No. 6551795 GENERAL INFORMATION:
                 SYSTEM: IBM P.C. DOS 5.0 Word Perfect 5.1
                                                                                 APPLICATION NUMBER: US/08/732,870
FILING DATE: October 15, 1996
CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (213) 489-1600
IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: (213) 955-0440
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Best Local Similarity 24.00.
-hos 84; Conservative
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LENGTH: 450 amino acids
                                                             CURRENT APPLICATION DATA:
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TELEX: 67-3510
INFORMATION FOR SEQ ID NO:
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                                                                                                                                                         PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HVGPMNPQLHAVGCDSLTQ1QCGQLQSRRAQIHQQ1DKELQMRTGAENLYR------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  170 TKELDWSTPLKELISVHFGEDGASYEABIRELEALRQAMRT-PSRNESGLELLTAYYNQL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             274 ----GALHTQIGA-----RODRSCTEGARRAMEAFQRAAGAFSLLRENFSHAPSFDMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AASLCALEQLMWAQAQECVFEGLSPPAS-----MAPQDCLAQLRLAQEAAQVAAEYRLVH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         421 IORRFLGEPGGNPHGHLOPGAR--RRVRAGGMRORRREHLAD-----HRGED--GR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            113 ---ATSNNRVRETVALELSYVNSNLOLLKEELEELSGGVDPGRHGSEAVTVPMIPLGLKE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      : | | : | | : | HRLLQGQ--LRRHPPLHRRTQPGG-----RALHPLRRARRGPGKRGGG-----
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                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                    260;
                                                                                                                                                                                                                                                                                Query Match 3.6%; Score 134; DB 4; Length 1266; Best Local Similarity 22.1%; Pred. No. 0.0043; Matches 178; Conservative 81; Mismatches 288; Indels 26
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PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 30851
LENGTH: 1266
                                                                                                                                                                  TYPE: PRT
ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                        US-09-252-991A-30851
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US-09-368-590-2

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       306 FSILRENFSHAPSPDMSA----ASLCALEQLMMAQAQECVFEGLSPPASWAPQDCLAQLR 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         362 LAQEAAQVAAEYRLVHRTWAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAWALCDGSP 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          519 APDIQPKTHQKPEA---RMPRLSQGKGPDIFHRLGPLSVFSAKNRWRLVGPVHLTRGEGG 575
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        195 BAEIRELEALRQAMRT-----PSRNESGLELLTAYYNOL-CFLDARF--LTPARSLGLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29 TRVSSLRGRREGIRDVCAWRGCRVHRGEDPVRVHVGPMNPQLHAVGCDSLTQIQCGQLQS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 3.5%; Score 131.5; DB 3; Length 2293; Best Local Similarity 21.2%; Pred. No. 0.019; Matches 161; Conservative 102; Mismatches 296; Indels 201;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1838 RLTTIEKIKAE-----QSKQPP------TPLLGRK--FF-----
Sequence 2, Application US/09368590
| Patent No. 6187563
| GENERAL INFORMATION:
| APPLICANT: Solimena, Michele
| TITLE OF INVENTION: INTERACTING POLYPEPTIDES FOR
| TITLE OF INVENTION: AUTOANTIGENS OF AUTOIMMUNE DISEASES
| TITLE OF INVENTION NUMBER: US/09/368,590
| CURRENT APPLICATION NUMBER: US/09/368,590
| CURRENT FILING DATE: 1999-08-04
| EARLIER FILING DATE: 1998-08-07
| NUMBER OF SEQ ID NOS: 8
| SOFTWARE: FASISEQ for Windows Version 3.0
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US-09-368-590-2
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Sequence 18483, Application US/09252991A
Patent No. 6551795
GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS;
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     184 -VRCGVAGIRRLQGIAPDRDATQVGVGCRYFEAQLGHPRRIQPQDLRRRPARLDTPQLRQ 242
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                                                                                                                                                                             717
--LTLRGDSPVLIA-AVIPGSQAAAAGLKEGDYIVS 610
                                                                                     667
                                                                                                                   ---AIGAWGGSELGCRLGRSLAGDPPAASDNKPAVPVPQAEPVAA 697
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                                                                                                                                                                           668 SOREHGCKIPASIWASPRPLLNWSRKAQQGKIG----GCP----QPCAPVKPAPPSSL
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                       --GGGLGAMAGKLPRLSRLPIR-NAPLQVASSLIDVABVYSSDLSESEKTI-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/09/252,991A CURRENT FILING DATE: 1999-02-18 PRIOR APPLICATION NUMBER: US 60/074,788 PRIOR FILING DATE: 1998-02-18 PRIOR APPLICATION NUMBER: US 60/094,190 PRIOR FILING DATE: 1998-07-27 NUMBER: OS 60/094,190 NUMBER: OS 60/094,190 NUMBER OF SEQ ID NOS: 33142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pseudomonas aeruginosa
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      563 LVGPVHLTRGEGGFG-
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                                                                                                                                                    GENERAL INC. 00001/00

GENERAL INCOMMATION:
GENERAL THROUGHTION:
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR APPLICATION NUMBER: US 60/094,190
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 27424
LIBNGTH: 751
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21.9%; Pred. No. 0.0054;
tive 80; Mismatches 254; Indels 326;
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                                                                                                                     Sequence 27424, Application US/09252991A Patent No. 6551795
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July 12, 2004, 19:58:24; Search time 637.213 Seconds (without alignments) 16460.437 Million cell updates/sec . UO Run

US-10-697-266-1 2469 Perfect score:

Sequence:

IDENTITY_NUC Gapop 10.0 , Gapext 1.0 Scoring table:

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3373863 seqs, 2124099041 residues

Searched:

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 su

summaries

N_Geneseq_29Jan04:* 1: geneseqn1980s:* Database

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New human kinase peptide and nucleic acid molecule, useful for treating disorders associated with abnormal expression of kinase protein, e.g. retinoblastoma, Wilm's tumor, in drug screening assays and

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Di Francesco V,

Rusch D, Ketchum KA, WPI; 2002-608516/65. P-PSDB; AAO18602.

(PEKE) PE CORP NY.

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ALIGNMENTS

Human; protein kinase N; kinase; PKN; eye retinoblastoma; bocio tumour; placenta choriocarcinoma; germ cell; leukocyte; uterus tumour; cancer; pre-B cell acute lymphoblastic leukaemia; Wilm's tumour; enzyme; brain anaplastic oligodendroma; uterus endometrial adenocarcinoma; cytostatic; gene therapy; chromosome 8; gene; ss. Human protein kinase N family kinase coding sequence. 1. .102 /*tag= a /*tag= b /*tag= b /product= "kinase" 2275 .2469 Location/Qualifiers AAL48837 standard; cDNA; 2469 29-JAN-2002; 2002WO-US002152 01-FEB-2001; 2001US-00773371 07-MAY-2001; 2001US-00849334 (first entry) /*tag= c WO200261062-A2 Homo sapiens 24-OCT-2002 08-AUG-2002. AAL48837; Key 5'UTR 3'UTR RESULT 1 CDS

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                                                                                  The present invention provides the protein and coding sequences of a novel human protein kinase N family protein. The sequences can be used in the treatment of disorders associated with the absence of, inappropriate, or unwanted expression of the protein, e.g. eye retinoblastoma, Wilm's tumour, placenta choriocarcinomas, bocio tumours, pre-B cell acute lymphoblastic leukaemias, uterus tumours, prain anaplastic oligodendromas and uterus endometrial adenocarcinomas. The present sequence is the CDNA of the invention. The gene is found on human chromosome 8
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유 장 Yue H, Thornton M, Walia NK, Gandhi AR; Swarnakar A, Duggan BM, Lu DAM, Thangavelu K; Khan FA, Yao MG, Emerling BM;

Yue H, Thornton M,

Ding L, Yu Baughn MR, Tang YT, K

Arvizu C, Warren BA, Burford N,

21-DEC-2000; 2000US-0257804P, 05-JAN-2001; 2001US-0260102P, (INCY-) INCYTE GENOMICS INC

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TACATTGTGTCAGTGAATGGGCAGCCATGCAGGTGGTGGAGACACGCGGGAGGTGGTGACG
             TCTAGACTGCCCAGCTTGGGGGACCGCCGGCCCGTCCTGCTGGGCCCCCAGGGGCTTCTA
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The present sequence encodes a human intracellular signalling molecule.

Such molecules are designated INTSIG. The INTSIG polypeptide or its
fragments, and the INTSIG polymuclectide are useful in diagnosing,

CC fragments, and treating disorders associated with an abnormal expression

CC activity of INTSIG, such as neurodegenerative disorders (e.g.

Parkinson's disease, Alzheimer's disease), muscular disorders (e.g.

myotronic dystrophy, caractenial, endocrine disorders (e.g. diabetes,

CG rave's disease), cancers (e.g. leukemia, cervical or breast cancers),

immunological disorders (e.g. scleroderma, systemic lupus erythematosus,

CG allergies), gastrointestinal disorders (e.g. crohn's disease), renal

cdisorders (e.g. Goodpasture's syntome), infections (e.g. viral,

callergies), gastrointestinal disorders (e.g. crohn's disease),

callergies) asstrointestinal disorders (e.g. crohn's disease),

con gisorders (e.g. atherosclerosis), or hepatic diseases (e.g. cirrhosis).

INTSIG or its fragments may also be used in screening for compounds that

cspecifically bind to and modulate the activity of INTSIG. The

polynucleotides can be used to create humanized animals or transgenic

cc animals to model human disease
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                                                                                                                                                                                                                                                 INTSIG polypeptides, useful for diagnosing, preventing, and treating disorders associated with an abnormal expression or activity of INTSIG, e.g. neuromuscular, immunological, cardiovascular disorders, cancer and
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                                                                                                                                                                                                                                                                                                                                                    5; Page 119-120; 126pp; English.
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                                    GCCCTCATCCTTGAAGCACCCAGGGTGGCCGTGAGGGCCAGGATCCCTGCACGCCTCAG
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Sequence 1013 BP; 197 A; 329 C; 336 G; 151 T; 0 U; 0 Other;
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                                                           2001-235186/24.
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Twenty nine nucleic acid molecules encoding human cancer associated proteins, useful in the prevention, treatment and diagnosis of cancer, immune disorders, cardiovascular disorders and neurological diseases.

The sequence encodes a novel Human cancer related protein. The polynucleotides and polypeptides are useful for preventing, treating or ameliorating a medical condition in e.g. humans, mice, rabbits, goats, horses, cats, dogs, chickens or sheep. The polypeptides can also be used as a food additive or preservative to increase or decrease storage capabilities. The polynucleotide are useful for chromosome identification. The nucleic acids, protein, antibodies, agonists and antagonists are useful in the diagnosis, treatment and prevention of cancer (e.g. cancers of the adrenal gland, bone, bone marrow, breast, gastrointestinal tract, liver, lung, or urogenital), immune disorders (e.g. Addison's disease, allergies, autoimmune haemolytic anaemia, autoimmune thyroiditis, diabetes mellitus, Crohn's disease, multiple colorimmunodaficiency syndrome, AIDS), cardiovascular disorders such as mycoardial ischaemias, wound healing, neurological diseases (e.g. Parkinson's disease, Alzheiner's disease, cerebral anoxia and epilepsy) and infectious diseases such as viral, bacterial, fungal and parasitic infections. Numerous examples of each type of disorder are given in the

GGCAAGGCACACCTGAAGCGTGCCATCCTGGGGCAGGAGGAGGCGCTGCGGGCTGCACGCC 1536 CTGTGCCGCGTCCTGCGGGGGGGGGCCTGCTGGGGTGTCCCCAAACGCTGCAG 1596 1716 1776 CGCTCACTGGCCAAGTATGCGGAGCTCGACGTGAGGATGACTTCTGTGAGGCTGCCGAG 1656 1836 146 266 206 326 GCCCCGGACATCCAGCCTAAGACCCACCAGAAGCCAGAGGCCAGGATGCCACGCCTGTCC 1777 AACCGGTGGCGGCTGGTGGGGCCCGTCCACCTGACCCGAGGAGGAGGGCGCTTTGGCCTC Gaps 2; tch 38.8%; Score 957; DB 5; Length 1013; al Similarity 99.3%; Pred. No. 1.5e-163; 982; Conservative 0; Mismatches 5; Indels ;

1956 2076 2136 1837 ACGCTTCGGGGAGACTCGCCTGTCCTCATCGCTGCCGTCATTCCAGGGAGCCAGGCCGCG 1896 2016 2196 2256 2316 2376 TCATGCTGGAGGCTGGCTCGGGCACCTGCCTCATAAAGACTGGTCAGACCTGTCTG 2436 746 626 989 864 805 GCGGCTGGCCTGAAGGAGGCGACTACATTGTGTCAGTGAATGGGCAGCCATGCAGGTGG CAGGTGGTGCTGCTGCCCCAGCTCTAGCCCCAGCTTGGGGGACGCCGGCCCGTC ACTGGAGGCTGCCCCCAGCCCTGTGCCCCAGTGAAGCCAGCTCCGCCCTCATCCTTGAAG ACTGGAGGCTG-CCCCAGCCCTGTGCCCCAGTGAAGCCAGCTCCGCCCTCATCATGAAG 865 CAGCAAGCACCGAGCATGCCCTCCCCACAGGGACCTCCGGGCAATGCCTGTCCCGCC TCCACGTGGGCCAGTCCCCGGCCCCTCCAACTGGAGCCGAAAGGCCCAGCAGGCCAAG CACCCAGGGTGGCCGTGAGGGCCAGGATCCCTGCACGCCCTCAGCCTCCAGCTGG CAGCAAGCACCGAGCATGCCCTCCCCACCAAGGACCTCCGGGCAATGCCTGTCCCGCC 985 AAAAAAAAAAAAAAAAAAAAAAAAAAAAA 1013 2437 AAAAAAAAAAAAAAAAAAAAAAAAAA 1897 1957 2077 2137 687 2197 747 267 627 2257 2317 2377 ò g ð 요 8 셤 ð g 8 g à g 원 ò à a à à

AAC77780 standard; cDNA; 1013 (first entry) 38-FEB-2001 AAC77780 RESULT

Human cancer associated gene sequence SEQ ID NO:174.

Human; cancer associated gene; cancer antigen; detection; cancer; diagnosis; cytostatic; proliferative; vulnerary; immunomodulator; antidabetic; antishematic; antishematic; antishematic; antibathritic; antibathritic; antibathritic; antibathritic; antibathritic; antibaterial; cardiant; dermatological; neuroprotective; thrombolytic; coagulant; nootropic; vasotropic; antipsoriatic; antiangiogenic; gene therapy; inflammation; immune disorder; haematopoietic cell disorder; attoimmune disorder; allergic reaction; graft versus host disease; organ rejection; haemostatic; thrombolytic; cardiovascular disorder; infection; neurological disease; drug screening; ss.

Homo sapiens

WO200055350-A1

08-MAR-2000; 2000WO-US005882.

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                                                                                                                                                                                                                                                                                                             AAC77607 to AAC78488 encode the human cancer associated proteins given in AAB43398 to AAB44239. The proteins can have activities based on the tissues and cells the genes are expressed in. Example of activities includes cytostatic; proliferative; vulnerary; immunomodulator; antidabetic; antiathmetic; antiathmitic; antiathmitic; antidabetic; antiathmetic; antialergic; antibacterial; antiviral; cardiant; thrombolytic; coagulant; noutropic antipportective; cardiant; thrombolytic; coagulant; cootropic; antipportective; cardiant; thrombolytic; coagulant; cootropic; antipportatic and antiangiogenic. The polynucleotides and polypeptides can be used for preventing, treating or ameliorating medical conditions and diagnosing pathological conditions. Polynucleotides, polypeptides, antibodies, agonists and antagonists from the present invention may be used to treat immune disorders by activating or inhibiting the proliferation, differentiation or mobilisation of immune calls, to treat disorders of haematopoietic cells, autoimmune disorders, allergic reactions, gradiovascular disorders, neclogical organists and antagonists may be also be used in drug screens. AAC78449 to AAC78457 and AAB44240 represent sequences used in the exemplification of
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                                                                                                                                                                                                                                                                                      Claim 1; Page 752-753; 2352pp; English.
                  99US-0124270P
                                                            (HUMA-) HUMAN GENOME SCI
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Matches 981; Conserv
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447 GCGCCTGGCCTGAAGGAGGCGACTACATTGTGTCAGTGAATGGGCAGCCATGCAGGTGG 506
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Human dithy biochemical pathway protein-encoding cDNA.

cancer; cell proliferative disorder; autoimmune disorder; inflammatory disorder; infection; hormonal disorder; metabolic disorder; neurological disorder; gastrointestinal disorder; transport disorder; connective tissue disorder; drug screening; proteome analysis; gene therapy; antisense therapy; genotyping; transgenic animal; knock in; biochemical pathway; gene; ss. Human; dithy; diagnostic and therapeutic polynucleotide; diagnosis;

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The invention relates to novel human diagnostic and therapeutic polynucleotides designated dithp (ACC46080-ACC46749) and to their encoded proteins (DITHP; ABR41136-ABR41812). The invention also relates to proteins (DITHP; ABR41136-ABR41812). The invention also relates to polynucleotide sequences at least 90% identical to the dithp cDNA sequences of the invention; recombinant vectors, host cells and transgenic organisms comprising a dithp nucleic acid sequence; the recombinant production of DITHP proteins; antibodies specific for DITHP proteins; antibodies specific for DITHP proteins and protein sequences; methods of detecting dithp nucleotide and protein sequences; methods of cetecting dithp nucleotide and protein sequences; methods of sessessing the toxicity of test compounds using a dithp hybridisation probe. Dithp nucleic acid sequences and DITHP proteins may be used in the diagorders of a wide variety of conditions including cancer and other cell problems of a wide variety of conditions including cancer and other cell proliferative disorders; autoimmune or inflammatory disorders; bacterial, viral, fungal or parasitic infections; hormonal disorders; transport of sorders; and connective tissue disorders. They may also be used to screen for modulators of protein activity or gene expression. DITHP proteins can additionally useful in somatic or germline gene therapy of the disorders additionally useful in somatic or germline gene therapy of the disorders and primers, in genotyping and indentification of individuals, in the generation of transgenic animal models of human disease or knock in humanised animals, in toxicological testing, and in transcript imaging. The present sequence represents a dithp once and disease or knock in humanised animals, in toxicological testing, and in transcript path for the present sequence represents a dithe patent did not form part of the printed specification, furnal directly from which is involved in a biochemical path and recomber of the present sequence represents expendence re
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel human diagnostic and therapeutic polypeptide useful for identifying test compound which specifically binds to a polypeptide encoded by human diagnostic and therapeutic polynucleotide, and to induce antibodies.
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Dufour GE, Hillman JL, Yu JY, Tuason O, Yap PB, Amshey SR;
Daughtery SC, Dam TC, Liu TF, Nguyen DA, Kleefeld Y, Gerstin EH;
Peralta CH, David MH, Lewis SA, Chen AJ, Panzer SR, Harris B;
Flores V, Marwaha R, Lo A, Lan RY, Urashka ME;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 3213 BP; 538 A; 1114 C; 1029 G; 532 T; 0 U; 0 Other;
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                                               20-JUN-2001; 2001US-0300001P.
20-JUN-2001; 2001US-0299776P
                                                                                                                             (INCY-) INCYTE GENOMICS INC
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Matches 1018; Conservative
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P-PSDB; ABR41761.
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genetic analysis; colorectal cancer; breast cancer; lung cancer; ss.
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The invention relates to substantially pure prostate-specific or testis-
specific polypeptides and the nucleic acids encoding them. Also included
are vectors and host cells expressing the proteins, a transgenic animal
expressing the protein, antibodies against the proteins, probes for
detecting the nucleic acids, antisense molecules for the nucleic acids
and methods of isolating modulators of the proteins. Compounds that
modulate the prostate specific or testis specific polypeptide are useful
to diagnose, prevent or treat disorders of the testis or prostate
particularly prostate cancer, benign prostatic hyperplasis, acute
prostatitis, testicular cancer, cryptorchidism, undescended, retractile,
ascending or vanished testis. Other proliferative disorders for which the
modulators may be used include lymphoma, leukaemia, melanoma, ovarian
cancer, breast cancer, pancreatic cancer, liver cancer and lung cancer.
The present sequence encodes a prostate specific protein, PSL22
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     440
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New polynucleotide for the diagnosis, prevention and treatment for prostate and testis disorders, particularly prostate cancer, comprises prostate-specific or testis-specific nucleic acids.
                                                                                                                                                                                                Human; prostate specific protein, PSL22; prostate cancer; benign prostatic hyperplasia; acute prostatitis; testicular cancer; cryptorchidism; testicular disorder; proliferative disorder; lymphoma; leukaemia; melanoma; ovarian cancer; breast cancer; pancreatic cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCACCAGCAGATTGACAAGGAGCTGCAGATGCGGACGGGCGCTGAGAACCTCTACAGAGC
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                                                                                                                                        prostate specific protein PSL22
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                                              TGACTICIGIGAGGCTGCCGAGGCCCCGGACAICCAGCCTAAGACCCACCAGAAGCCAGA
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hypotensive; cardiomyopathy; bronchial asthma; gene therapy; vaccine;
human; gene; ss.
                                                                                                          1695 GGCCAGGATGCCACGCCTGTCCCAGGGGAAGGGGCCTGACATCTTCCATCGGCTGGGGCC
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08-MAR-2001; 2001US-0274322P.
09-MAR-2001; 2001US-027533P.
12-MAR-2001; 2001US-027533P.
13-MAR-2001; 2001US-0275579P.
13-MAR-2001; 2001US-0275601P.
14-MAR-2001; 2001US-0275601P.
16-MAR-2001; 2001US-027600P.
16-MAR-2001; 2001US-0276994P.
20-MAR-2001; 2001US-027733P.
20-MAR-2001; 2001US-0277321P.
21-MAR-2001; 2001US-0277321P.
22-MAR-2001; 2001US-0277321P.
25-MAR-2001; 2001US-0277321P.
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, Anderson D;
Alsobrook JP;
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), Gusev V, Ji W, Gorman L, Miller CE, Kekuda R;
M Gangolli E, Vernet CAM, Guo X, Tchernev V,
RR, Casman SJ, Malyankar UM, Gerlach V, Liu Y, An
', Catterton E, Burgess C, Leite M, Zhong H, Alsol
Rieger DK;
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2001US-0304354P.
2001US-0309198P.
2001US-0312903P.
2001US-0318462P.
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2001US-0291190P.
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Zerhusen BD, G
Patturajan M,
Fernandes ER,
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18-OCT-2001; 2
31-OCT-2001; 2
14-NOV-2001; 2
27-MAR-2001; 2
27-MAR-2001; 2
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30-MAR-2001; 2
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14-NOV-2001;
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This invention describes novel human NOVX polypeptides which have cytostatic, cardiant, antiarteriosclerotic, antiasthmatic and hypotensive activity pharmaceutical compositions comprising the NOVX proteins or nucleic acid molecules or NOVX antibodies are useful for preventing or treating a disorder associated with aberrant NOVX expression or activity e.g. cancer, hypertension, atherosclerosis, cardiomyopathy or bonchial asthma. The products of the invention can be used for gene therapy or in a vaccine. ABX97008-ABX97185 are cDNA fragments amplified and isolated by the PCR primers and probes represented in ABX13460-ABX13462 and ABX97186-

Claim 13; Page 471; 1103pp; English.

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tumour; liposarcoma; ichthyosis congenita III;
benign familial infantile convulsion; gene therapy.
                        CATCCTCCTCATCGACCACGGGGAAGCCAGGCACGGATCTGGACCACCAGGAGAGTG
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   the NOVX proteins described in
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                                            518 A; 574 C; 585 G; 432 T; 0 U; 0 Other;
                                                                     Query Match
20.0%; Score 494.8; DB 6; Length 2
Best Local Similarity 56.7%; Pred. No. 4.6e-80;
Matches 976; Conservative 0; Mismatches 732; Indels
ABX97593. ABX97008-ABX97185 encode
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                                                                                                                                                                                                                                                                                                                                                                                                                                               The invertion relates to an isolated GTP-Rho binding protein 2 (RRBP2) which at least 95% of deviations from GRBP2 sequences are conservative which at least 95% of deviations from GRBP2 sequences are conservative which at least 95% of deviations from GRBP2 sequences are conservative which at least 95% of deviations from GRBP2 sequences are conservative conding GRBP2 comprising the full length cDMA or CDS, fragments or variants, GRBP2 comprising the full length cDMA or CDS, fragments or variants, GRBP2 comprising the full length cDMA or CDS, fragments or contain GRBP2 NA (or unable to express the endogenous or the contain GRBP2 NA (or unable to express the endogenous or the contain GRBP2 NA (or unable to express the endogenous or GRBP2 or altered expression of GRBP2, ant-agonists of GRBP2, GRBP2 (GRBP2), diagnosing a disease caused by a mutation in human GRBP2 or altered expression of GRBP2, ant-agonists of GRBP2, GRBP2 (GRBP2) NA and Ab are useful for identifying binding partners of GRBP2 (GRBP2) NA and Ab are useful in therapy and in the expression of GRBP2 (GRBP2) or decreased expression or activity of human GRBP2 (e.g. tumours, liposarcoma, ichthyosis congenita III and benign cassociated with increased or decreased expression or activity of human GRBP2 (e.g. tumours, liposarcoma, ichthyosis congenita III and benign coation of GRBP2, 19912). GRBP2 is useful as a standard in immunoassay specific for the proteins, to be used in a therapeutic agent as samidans (c.g. for raising antibodies. GRBP2 NA is useful as hybridisation probes, to prime synthesis of nucleic acids, to prime first strand cDNA sequence on an mRNA template, and to drive in vivo expression of the proteins. The vector is useful for shuttling GRBP2 NA into host cells derived from disparses or antisense and in virto or within a host cell, and for expressing GRBP2 and as an immuno consert expension and quantification of GRBP2 and as an immuno consert expension is a legent for flow cyrometric detection, and quantification of GRBP2 and as an immuno co
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                                                                                                                                                                                                                                                                                                                              Novel GTP-Rho binding protein 2 and nucleic acids encoding the protein, useful for the manufacture of a medicament for treating a disease associated with altered expression or activity of human GRBP2 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                       invention relates to an isolated GTP-Rho binding protein 2 (GRBP2)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20.0%; Score 493.2; DB 6; Length 2061; 56.7%; Pred. No. 8.9e-80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 2061 BP; 505 A; 559 C; 574 G; 423 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       present sequence is a GRBP2 cDNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Page 48-49; 101pp; English
                                                                                   2001WO-US000666.
2001WO-US000667.
                                                                                                                      2001WO-US000668.
                                                                     2001WO-US000665
                                                                                                                                                        2001WO-US000670
                                                                                                                                                                         29-JUN-2001; 2001US-00895040
17-JAN-2002; 2002EP-00001026
                                                    2001WO-US000664
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Matches 975; Conservative
                                                                                                                                                                                                                                                                                WPI; 2002-684026/74.
                                                                                                                                                                                                           AEOMICA INC.
                                                                                                                                                                                                                                              JY Y;
                                                                                                                                                                                                                                                                                               P-PSDB; ABG94709
                                                                                                                      30-JAN-2001; 2
30-JAN-2001; 2
30-JAN-2001; 2
                                                                                   30-JAN-2001;
                                                  30-JAN-2001;
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                                                                                                                                                                                                                                              Shannon ME,
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981 CCGCGCTATGGAGGCCTTCCAGAGGCCGCTGGGGCCTTCAGCCTCCTGAGGGAGAACTT 1040
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TGATCAGCAGCGCCGACAGCTGGGGAAGTCCCACTTGCGCAGAGCCATGGCTCATCACAA
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1263 GGAGTCGGTGCGGGAGGCAGCCTCTGCAAGAAGCTGCGGAGCATTGAGGTGCTACAGAA 1322

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; ss; GTP-Rho binding protein 2; GRBP2; chromosome 19q12; oncogene; tumour; liposarcoma; ichthyosis congenita III; benign familial infantile convulsion; gene therapy.
TGTGATCTCCCAGACGCTGCAGCGCTCACTGGCCAAGTATGCGGAGCTCGACCGTGAGGA
                                                                                1383 TGACCTGCTGAACCTGATCGACGCCCCCAGTGTTGTTGCTAAAACTGAGCAAGAGGTTGA
                                                                                                                                   CATTATATATIGCCCCAGTICTCCAAGCTGACAGTCACGGACTTCTTCCAGAAGCTGGGCCC
                                                                                                                                                              CCTGTCTGTGTTCTCAGCCAAGAACCGGTGGCGGCTGGTGGGGCCCCGTCCACCTGACCCG
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                         1323 GGTGCTGTGTGCCGCACAGGAACGCTCCCGGCTCACGTACGCCCAGCACCAGGAGGA
                                                                                                           1695 GGCCAGGATGCCACGCCTGTCCCAGGGAAGGGGCCTGACATCTTCCATCGGCTGGGGCC
                                                                                                                                                                                                                                             1563 AGAAGAAGGGGACTTGGGGTTCACCTTGAGAGGAACGCCCCCGTTCAGGTTCACTTCCT
                                                                                                                                                                                                                                                                        1875 CATTCCAGGGAGCCAGGCCGCGGCTGGCCTGAAGGAGGCGACTACATTGTGTCAGT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human cDNA encoding GTP-Rho binding protein 2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
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The invention relates to an isolated GIP-KND Dinding process or through the invention relates to an isolated mucleic acid (GRBP2 AN) encoding GRBP2 comprising the full length cDNA or CDS, fragments or substitutions. Also included are an isolated mucleic acid (GRBP2 NA) encoding GRBP2 comprising the full length cDNA or CDS, fragments or variants, GRBP2 vectors, host cells, antibodies, transgenic non-human animals modified to contain GRBP2 NA (or unable to express the endogenous orthologue of GRBP2), diagnosing a disease caused by a mutation in human grapes or altered expression of GRBP2, ant-agonists of GRBP2, GRBP2 or altered expression of GRBP2 is a serening for agents that modulate the expression of GRBP2 NA and Ab are useful in therapy and in the expression of GRBP2 NA and Ab are useful in therapy and in the expression of GRBP2 NA and Ab are useful in therapy and in the expression of GRBP2 NA and Ab are useful in therapy and in the expression of GRBP2 (e.g. tumours, liposarcoma, ichthyosis congenita III and benign GRBP2 (e.g. tumours, liposarcoma, ichthyosis congenita III and benign contained in increased expression or activity of human GRBP2 (e.g. tumours, liposarcoma, ichthyosis congenita III and benign contained in increased expression or activity of mumunoassay specific for the proteins, to be used in a therapeutic agent, as specific for the proteins, to be used in a therapeutic agent, as to prime synthesis of nucleic acids, to prime first strand cDNA sequence or an englas and an anishing antibodies. GRBP2 NA is useful as hybridisation probes, to prime synthesis of nucleic acids, to prime first strand cDNA sequence or an englasense RNA transcripts of GRBP2 in an immuno contained from within a host cell, and for expressing GRBP2 NA between host cell chromosome, the terologous polypeptides. The antibody is useful as an analytical rangentic agent and is useful for flow cytometric detection, or fearence or a sequence is a GRBP2 cDNA sequence
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Novel GTP-Rho binding protein 2 and nucleic acids encoding the protein, useful for the manufacture of a medicament for treating a disease associated with altered expression or activity of human GRBP2 protein.
                                                                                                                                                            invention relates to an isolated GTP-Rho binding protein 2 (GRBP2)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 3484 BP; 932 A; 814 C; 842 G; 896 T; 0 U; 0 Other;
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Pred. No. 9.4e-80;
0; Mismatches 733
                                                                                                          Claim 1; Fig 3; 101pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 20.0%;
Best Local Similarity 56.7%;
Matches 975; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           329
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741 GAATGAGTCGGGCCTGGAGCTGCTCACAGCCTATTACAACCAGCTGTGCTTCCTGGATGC 800

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WPI; 2002-684026/74. P-PSDB; ABG94709.

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AGAAGAAGGGGACTTGGGGTTCACCTTGAGAGGGAACGCCCCCGTTCAGGTTCACTTCCT 1642
                                                                                                                                        GAATGGCCAGCCATGCAGGTGGTGGAGACACGCGGAGGTGGTGACGCAGCTGAAGGCTGC 1994
                                                                                                                                                                                 TCAGCTTGTGGATTGTAAGTGGCTGACGCTGAGGTTATGAAGCTGCTGAAGAGCTT 1762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human, guanosine triphosphate binding associated protein; GTP, GBAP,
inflammation; AIDS; Addison's disease; anaemia; arteriosclerosis; asthma;
autoimmune disorder; hepatitis; multiple sclerosis; cancer; diabetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCAGAGCCCCAGGCCCAGGATTCACCAGCAGATTGACAAGGAGCTGCAGATGCGGACGG 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention relates to novel human guanosine triphosphate (GTP)-binding associated proteins (GBAPs; AAB68501-AAB68566) and their coding sequences (AAF58301-AAF58366). The proteins and coding sequences of the present invention are useful for treating a variety of disorders including inflammation, AIDS, Addison's disease, anaemia, arteriosclerosis, asthma, autoimmune disorders, Grave's disease, hepatitis, multiple sclerosis, cancer, diabetes, osteoporosis and
                                                                                              CATTCCAGGGGCCAGGCCGCGGCTGCCTGAAGGAGGCGCGACTACATTGTGTCAGT
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Patterson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New guanosine triphosphate-binding associated proteins (GBAP) encoding nucleic acids, useful for treating and/or diagnosing associated with GBAP expression, such as cancer, diabetes and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 4; Length 3019;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human GTP-binding associated protein #61 coding sequence
                                                                                                                                                                                                                                 2034
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Lu DAM, Azimzai Y,
                                                                                                                                                                                                                             GGGAGAGGCGCCCAGCCTGCAGGTGGTGTCGCTGCTG
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99US-0150460P.
99US-0159849P.
                                                                                                                                                                                                                                                                                                                                                                                     standard; cDNA; 3019
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Yang J, Baughn MR,
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56.9%;
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Best Local Similarity 56.9
Matches 957; Conservative
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(CURA-) CURAGEN CORP.

Padigaru M, Spytek KA, Shenoy SG, Taupier RJ, Pena CEA, Li L; Serhusen BD, Gusev V, Ji W, Gorman L, Miller CE, Kekuda R; Patturajan M, Gangolli E, Vernet CAM, Guo X, Tchernev V; Fernandes ER, Casman SJ, Malyankar UM, Gerlach V, Liu Y, Anderson D; Spaderna SK, Catterton E, Burgess C, Leite M, Zhong H, Alsobrook JP; Rieger Lepley DM,

WPI; 2002-723332/78. P-PSDB; ABU65215 NOVX polypeptides and polynucleotides, useful for preventing or treating a disorder associated with aberrant NOVX expression or activity e.g., cancer, hypertension, atherosclerosis, cardiomyopathy or bronchial asthma.

Claim 13; Page 470; 1103pp; English

cytostatic, cardiant, antiarteriosclerotic, antiasthmatic and hypotensive activity. Pharmaceutical compositions comprising the NOVX proteins or nucleic acid molecules or NOVX antibodies are useful for preventing or treating a disorder associated with aberrant NOVX expression or activity esq. cancer, hypertension, atherosclerosis, cardiomyopathy or bronchial asthma. The products of the invention can be used for gene therapy or in a vaccine. ABX97008-ABX97185 are CDNA fragments amplified and isolated by ABX97008, ABX97008 and probes represented in ABX13460-ABX13462 and ABX97186-ABX97283. ABX97008-ABX97185 encode the NOVX proteins described in CTCCCATGCGCCGAGCCCAGACATGAGCGCTGCGTCCCTCTGCGCACTGGAGCAGCTCAT 1100 620 473 533 800 860 920 413 680 653 774 GAGTGCCATAGATGCCTTTCAGAGAGCCGCAGGGGTTTTAAATTACCTGAAAGACACATT 833 321 GGGCTGTGACTCCCTGACGCAGATCCAGTGCGGCCAGAGTCGCAGAGCCGCAGAGT 381 TCACCAGCAGATTGACAAGGAGCTGCAGATGCGGACGGGCGCTGAGAACCTCTACAGAGC GAATCAGCAGATCCTGAAAGCCGTGCGGATGAGGACCGGAGCGGAAAACCTTCTGAAAGT CACCAGCAACAACAACGGGTGAGAGAGACGGTCGCCCTGGAGCTGAGCTACGTCAACTCCAA 474 ATATGAAGATGAAATTGCAGATCTTATGGATCTGAGACAAGCTTGTCGGACGCCTAGCCG GAATGAGTCGGGCCTGGAGCTGCTCACAGCCTATTACAACCAGCTGTGCTTCCTGGATGC GGATGAGGCCGGGGTGGAACTGCTGATACTTCATCCAGCTGGGCTTTTGTCGAGAG 594 TCGATTCTTCCCGCCCACACGCAGATGGGACTCCTGTTCACCTGGTATGACTCTTCAC 861 TGGGGTCCCGGCCCAGCAGCGTGCCCTGGCCTTCGAGAAGGGCATCTCTTCAACAT 654 CGGGGTTCCGGTCAGCCAGCAGAACCTGCTGCTGGAGAAGGCCAGTGTCCTGTTCAACAC CGGTGCCCTCCACACGCAGATTGGGGCGCGCCAGGACCGCTCCTGCACGAGGGTGCCCG 714 TGGGGCCCTCTACACCCAGATTGGGACCCGGTGTGATCGGCAGACGCAGGCTGGGCTGGA CCGCGCTATGGAGGCCTTCCAGAGGCCGCTGGGGGCCTTCAGCCTCCTGAGGGAGAACTT 834 TACCCATACTCCAAGTTACGACATGAGCCCTGCCATGCTCAGCGTGCTCGTCAAAATGAT 114 GGGCTGTAATCCCCTTGCACAAACCGGCCGGGGTAAATTGCAGAATCAAAGAGCTGCTTT 234 GGCCACAAACTCAAAGGTGCGGGAGCAAGTGCGGCTGGAGCTGAGCTTCGTCAACTCAGA CCTGCAGCTGCTGAAGGAGGTGGAGGAGCTCAGCGGTGGCGTGGACCCTGGCCGGCA 294 ceriscasarisercaassasasas de consenera con consecuencia de TGGGAGCGAAGCTGTCACTGTCCCCATGATCCCCCTGGGGCCTGAAGGAGCACCAAGGAGCT 354 CACAGAGGATTTACGATTCCCCTGATTCCTCTTGGCCTGAAGGAAACGAAAGGCGT GGACTGGTCTACACGCTGAAGGAGCTGATCTCAGTGCACTTTGGAGAGGACGGCGCCTC 414 CGACTTTGCAGTCGTCCTCAAGGATTTTATCCTGGAACATTACAGTGAAGATGGCTATTT CTACGAGGCAGAAATCAGGGAGCTGGAGGCCCTGCGGCAGGCCATGCGGACCCCCAGGCG GCGCTTCCTCACCCCTGCCAGGAGCCTCGGGCTCTTCCACTGGTACGACTCGCTTAC Gaps This invention describes novel human NOVX polypeptides which have 18.8%; Score 463.6; DB 6; Length 2310; 56.7%; Pred. No. 2e-74; Live 0; Mismatches 729; Indels 16; Sequence 2310 BP; 569 A; 622 C; 628 G; 491 T; 0 U; 0 Other; Local Similarity 56.7 hes 977; Conservative 441 (174 681 741 981 1101 801 Query Match Matches \$88888888888888**%**& 염 g qq ò 8 임 ò 셤 Š ò ò 셤 à 셤 8 Dp à g ò g $\dot{\delta}$ g 8 g

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The present sequence is one of fifty-two human polynucleotides for diagnostics and therapeutics. The polynucleotides are referred to as DITHP polynucleotides and polypeptides are useful for diagnosing and treating diseases such as cancer, particularly breast and ovarian cancer, and other cancers of the adrenal gland, bone, bone marrow, breast, gastrointestinal tract, liver, lung, or urogenital, immune disorders such as Addison's disease, allergies, autoimmune hamolytic anaemia, autoimmune thyroiditis, diabetes mellitus, Crohn's diseases multiple sclerosis, rheumatoid arthritis and ulcerative collits; cardiovascular disorders such as myocardial isohaemias, neurological diseases such as cerebral palsy and epilepsy, infections diseases such as viral, bacterial, fungal and parasitic infections; and endocrine disorders of hypothalamus), disorders essociated with hypothyroidism and hyperthyroidism, pancreatic disorders essociated with hypothyroidism and hyperthyroidism, pancreatic disorders essociated with consisting for molecules that bind too rare bound by the encoded polypeptides. The anti-DITHP antibodies are useful in diagnostic assays NO: 49. H Human polynucleotide for diagnostics and therapeutics, SEQ BP

standard; cDNA; 2757

AAC91349

RESULT 14 AAC91349 (first entry)

16-MAR-2001

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AAC91349;

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immunosuppressive; nootropic; neuroprotective; antiviral; antiallergic; hepatotropic; antidiabetic; antiinflammatory; antiulcer; vulnerary; anticonvulsant; antibacterial; antibagal; antiparasitic; cardiant; cancer; immune disorder; cardiovascular disorder; neurological disease; infection; endocrine disorder; metabolic disorder; ss.
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99US-0147536P.
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                                                     Homo sapiens
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Banville SC; '... MS, Hillman JL; ""inht RJ;

Chalup MS, H. Roseberry AM,

), Spiro PA, r, Rosen BH, Panzer SR,

In SE, Russo FD, ur GE, Cohen HJ, Greenawalt LB,

Lincoln SE, Dufour GE, u JY, Greenaw

Hodgsom Bratcher SR, Dr

Jones AL, Daniels SE;

(INCY-) INCYTE GENOMICS INC.

Fifty two human polynucleotides, referred to as DITHP polynucleotides, useful in the diagnosis and treatment of cancer, immune disorders and

Claim 1; Page 261-262; 263pp; English.

neurological diseases.

WPI; 2001-016511/02.

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08-DEC-2000; 2000US-00733288.

08-DEC-2000; 2000US-00733742.

24-JAN-2001; 2001US-0263957P.

16-MAR-2001; 2001US-0276791P.

16-MAR-2001; 2001US-0276888P.

06-APR-2001; 2001US-0281922P.

24-APR-2001; 2001US-0286214P.
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                                                                          Gaps
                                 Score 418.2; DB 4; Length 2757;
Pred. No. 3.2e-66;
0; Mismatches 653; Indels 15;
BP; 735 A; 622 C; 682 G; 713 T; 0 U; 5 Other;
                                   16.9%;
56.9%;
                             Query Match
Best Local Similarity 56.94
Matches 882; Conservative
Sequence 2757
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WPI; 2002-471335/50.

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E-PSDB, ABG61936.

E-PSDB, ABG61936.

Detecting a prostate cancer-associated transcript in a cell in a patient, useful for diagnosing prostate cancer-associated genes are expressed in a prostate tissue.

PT we present invention relates to methods of detecting a prostate cancer-associated transcript in a cell from a patient. The method comprises contacting a biological sample from the patient with prostate cancer-associated polynucleotides (designated PC genes) that selectively contacting a biological sample from the patient with prostate cancer-associated polynucleotides (designated PC genes) that selectively contacting a biological sample from the patient with prostate cancer the contact of the invention are useful for diagnosing and treating prostate cancer in mammals (e.g. mice, sheep and dogs). The methods of the invention are useful for diagnosing and treating modulators of prostate cancer cancer. Cassociated genes are useful for diagnosing or treating prostate cancer. Cassociated genes are useful for diagnosing or treating prostate cancer. The nucleic acid sequences are particularly cuseful in gene therapy, as a vaccine or in antisense applications.

CHARV32115-ABK92263 represent prostate cancer as a vaccine or in antisense applications.

AND Sequences 1671 BP; 402 A; 459 C; 457 G; 353 T; 0 U; 0 Other;
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Sequence 1671 BP; 402 A; 459 C; 457 G; 353 T; 0 U; 0 Other;

Query Match
Best Local Similarity 56.0%; Pred. No. 3.3e-59;
Matches 783; Conservative 0; Mismatches 603; Indels 12; Gaps

1002 1062 1122 1182 GGCCTGGCGCAGGAGGCCGCCCAGGTGGCAGCCGAGTACAGGCTAGTGCACCGGACCATG 1242 480 762 120 180 882 240 942 300 360 420 GAGCTGATCTCAGTGCACTTTGGAGGAGGACGGCGCCTCCTACGAGGCAGAAATCAGGGAGA 702 822 9 CTTATGGATCTGAGACAAGCTTGTCGGACGCCTAGCCGGGATGAGCCGGGGTGGAACTG crearcaractricarccaecreegerringreadagaercearricarceecceacacee 823 AGCCTCGGGCTCTTCTTCCACTGGTACGACTCGCTTACTGGGGTCCCGGCCCAGCAGCGT cagaridedacricererrederareacricererededederecederedecage | degacccedererearcecagacecagecredecregagagacecaradarecerricae AGGGCCGCTGGGGCCTTCAGCCTCCTGAGGGAGAACTTCTCCCATGCGCCGAGCCCAGAC ATGAGCGCTGCGTCCCTCTGCGCACTGGAGCTCATGATGGCCCCAGGCCCCAGGAATGT ATGAGCCCTGCCATGCTCAGCGTGCTCGTCAAAATGATGCTTGCACAAGAAGGCCCAAGAAAGC Grennicadaaaancagcenreche----gaanceggaandaarnerreargere GATTTTATCCTGGAACATTACAGTGAAGATGGCTATTTATATGAAGATGAAATTGCAGAT CTGGAGGCCCTGCGGCCATGCGGACCCCCAGCCGGAATGAGTCGGGCCTGGAGCTG CTCACAGCCTATTACAACCAGCTGTGCTTCCTGGATGCGCGCTTCCTCACCCCTGCCAGG 883 GCCCTGGCCTTCGAGAAGGGCAGCGTTCTCTTCAACATCGGTGCCCTCCACACGCAGATT 241 AACCTGCTGCTGGAGAAGGCCAGTGTCCTGTTCAACACTGGGGGCCCTCTACACCCCAGATT GTGTTTGAGGGCCTCTCACCACCTGCCTCCATGGCCCCCCAAAACTGCCTGGCCCAGCTG <u> AGAGCCGCAGGGGTTTTAAATTACCTGAAAGACACACATTTACCCATACTCCAAGTTACGAC</u> 1003 361 1063 1183 643 61 181 943 301 421 1123 481 703 763 121 g à В ద ò 셤 à g à g ò gg ð 셤 à 엄 ð ð à

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Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Description		AR269115 Sequence	AX675063 Sequence	BC025767 Homo sapi	ABU67516 Homo sapi	U43194 Mus musculu	BC052010 Mus muscu	AJ347749 Canis fam	BD214873 Novel hum	BC036447 Homo sapi	AX835273 Sequence		AAU//6/2 Sequence AL831950 Homo sapi	BC044556 Danio rer	Arsgitse Danio rer AF268032 Homo sapi	AX593072 Sequence	AR269116 Sequence AX642311 Sequence	AF276758 Homo sapi	AC105118 Homo sapi	AK126506 Homo sapi	AF132025 Drosophil	AC135076 HOMO BAD1 AF189001 Homo sapi	AC087793 Homo sapi	BD213706 Novel hum	AF276758 Homo sapi		Mus mus	AC097158 Rattus no AC133673 Rattus no	1111	AC092401 Drosophil	3431	33.0	4.0	35,			linear PAT 10-APR-2003					and Beasley, E.M. acid molecules encoding	
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Intracellular signaling molecules
Patent: WO 0207735-A 11 03-0CT-2002;
Incyte Genomics, Inc. (US)
Location/Qualifiers
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/organism="Homo sapiens"
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/note="Incyte ID No: 5560161CB1"
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	BC025767 Homo sapiens rhophilin, Rho GTPase binding protein 1, mRNA (cDNA clone MGC:34714 IMAGE:5211354), complete cds. Homo sapiens (complete cds.) BC025767.1 GI:19343950 MGC. Homo sapiens (human) BMGC. Homo sapiens (human) SM Homo sapiens (human) SM Homo sapiens (human) SM Homo sapiens (human) SM Homo sapiens (human) Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. Li (bases I to 3763) S Strausberg, R.D., Feingold, E.A., Grouse, L.H., Derge, J.G., Rlausner, R.D., Collins, F.S., Megner, L., Shenmen, C.M., Schuler, G.D., Altechul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Hopkins, R.F., Jordan, H., Moore, T., Mars, S.I., Wang, J., Haieh, F., Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L., Stapleton, M., Soares, M.B., Bosak, S.A., McEwan, P.J., Mullahy, S.J., Bosak, S.A., McEwan, P.J., Hale, S., Garcia, A.M., Gay, L.J., Hullyk, S.W., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Faheey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevin, S., Loushan, J.W., Schmutz, J., Myers, R.N., Boutfard, G.G., Blakesley, R.W., Touchman, J.W., Schmutz, J., Myers, R.N., Butterfield, Y.S., Krzywinski, M.I., Schmutz, J., Myers, R.N., Butterfield, Y.S., Krzywinski, M.I., Salaka, J. A. and Marra, M.B. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences
8 4 8 6 8 6 8 6 8 6 8 6 8 6 8 6 8 6 8 6	RESULT 4 BC025767 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM AUTHORS AUTHORS TITLE
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transduction proteins, including Rhophilin and BRO1"

/db_xref="CDD:pfam03097"

/hof1. :181

/note="PDZ: Region: Domain present in PSD-95, Dlg, and
ZO-1/2. Also called DHR (Dlg homologous region) or GLGF

Krelatively well conserved tetrapeptide in these domains).

Some PDZs have been shown to bind C-terminal polypeptides"

/db_xref="CDD:smart00228"
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Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
Tissue Procurement: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Mational Institutes of Health Intramural
Sequencing Center (NISC),
Gaithersburg, Maryland,
Web site: http://www.nisc.nih.gov/
Contact: nisc_mgc@nhgri.nih.gov/
KARter,N., Ayelle,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karlins,E., Kwong,T., Laric,P., Lageaspi,R.,
Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D.,McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Vonna A., And C., Makker,M. M., Wetherby,K.D., Wiggins,L.,
Vonna A., And C., Mand, R., Metherby,K.D., Wiggins,L.,
Vonna A., And C., Mand, M., Wetherby,K.D., Wiggins,L.,
Vonna A., And C., Mand, M., Wetherby,K.D., Wiggins,L.,
Vonna A., And C., Mand, M., Wetherby, K.D., Wiggins,L.,
Vonna A., And C., Mand, M., Wetherby, K.D., Wiggins,L.,
Vonna A., And C., Wiggins,L., Webberger, M., Wetherby, K.D., Wiggins,L.,
Vonna A., And M., W., Wetherby, K.D., Wiggins,L.,
Vonna A., And M., W., Webberger, M., Wetherby, K.D., Wiggins,L.,
Vonna A., And M., W., Webberger, M., Webberg
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RSGLELLTYNYVOLCELDARVELTPRASLGLFFHWYDSLTGYPAQQEALFEKGSVLF
NIGALHTOT GARQDRSCTEGARRAMEA PGRAGAS FSLILENFGHASPSDMASASLCAL
BQLMMAQAQECVFGLSPPASMAPQDCLAQLRLAQEAAQVAAEYRLIVHRTWAQPPVHD
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PVLPQELEERROLGKAHLKRAILGQEBALRLHALCRVLREVDLLRAVISGTLQRSLAK
YAELDREDDPCEAAEAPDIQPKTHQKPEARMPRLSQGKGPDIFHRLGPLSVFSAKNRW
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RHAEVVTELKAAGBAGASLQVVSLLPSSRLPSLGDRRPVLLGPRGLLRSQREHGCKTP
ASTWASPRPLINWSRKAQQGKTGGCPQPCAPVKPAPPSSLKHPGWP"
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DXELQMRIGAENLYRAISNNRVRETVALELSYVNSNLQLLKEELEELSGGVDPGRHGS
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/note="BRO1; Region: BRO1-like domain. This functionally
uncharacterised domain is found in a number of signal
                                                                                                                                   Submitted (06-MAR-2002) National Institutes of Health, Mammalian Sene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA.
               99 (26), 16899-16903 (2002)
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/db_xref="taxon:9606"
/clone="MGC:34714 IMAGE:5211354"
/tissue_type="Blood, adult leukocytes"
/clone_lib="NIH MGC_118"
/lab_bost="DH10B"
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/db_xref="LocusID:114822"
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'db_xref="CDD:pfam02185"
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Young, A., Zhang, L.-H. and Green, E.D.
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/protein_id="AAH25767.1"
/db_xref="GI:19343951"
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/organism="Homo sapiens"
          Proc. Natl. Acad. Sci. U.S.A.
22388257
12477932
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/codon_start=1
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/gene="RHPN1"
                                                                                           (bases 1 to 3763)
                                                                                                                   Strausberg, R.
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/noce="Start codon is not identified. fj08985 cDNA clone for KIAA1929 has 349-bp, 320-bp and 413-bp insertions after the positions 450, 936 and 1283 of the sequence of KIAA1929, respectively."

/codon_start=1
/product="KIAA1929 protein"
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/db xref="G1:1562091"
/translation="EERPDGAGGESPRLQGCDSLTQIQCGQLQSRRAQIHQQIDKE LQMRTASENNYBETVALELSYNNSNLQLERELEBLEAGGYUDGRHGSBAV TVBNIPLELISARSNLGETKELLBARGSAVLENIG GLEILTAXYNQLCFLDARFLTPARSLGLFFWYDSLTGVPAQQRALAPERGSVLFNIG ALHTQIAGARGASTELRENSTRANSTRANGLCALEQUANG ALHTQIAGARGASTELRENSTRANSTRANGLCALEQUANG ALHTQUANGLCALEQUANG ALHTQIAGARGASTELRENSTRANSTRANGLCALEQUANG ALHTQIAGARGASTELRENSTRANSTRANGLCALEQUANG ALHTQIAGARGASTELRENSTRANSTRANGLCALEQUANG ALHTQIAGARGASTELRENSTRANSTRANGLCALEQUANG ALHTQIAGARGASTELRENSTRANSTRANGLCALEQUANG ALHTQIAGAGASTELLENSTRANSTRANGLCALEQUANG ALHTQIAGAGASTELLENSTRANSTRANGLCALEQUANG ALHTQIAGAGASTELLENSTRANGSTRANGLCALEQUANG ALHTQIAGAGASTELLENSTRANGSTRANGLCALEQUANG ALHTQIAGAGASTELLENSTRANGSTRANGLCALEQUANG ALHTQIAGAGASTELLENSTRANGSTRANGSTRANGLCALEQUANG ALHTQIAGAGASTELLENSTRANGSTRANGSTRANGLCALEQUANG ALHTQIAGAGASTELLENSTRANGSTRANGSTRANGSTRANGLCALEQUANG ALHTQIAGAGASTELLENSTRANGSTRANGSTRANGLCALEQUANG ALHTQIAGAGASTELLENSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRANGSTRA
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Chara. 0., Magase T. and Kikuno, R.
Chara. 0., Magase T. and Kikuno, R.
Submitced Submission
Submitced (27-JUL-2001) Osamu Ohara, Kazusa DNA Research Institute,
Department of Human Gene Research; 1537-3, Yana, Kisarazu, Chiba
292-0812, Japan (E-mail:cdnainfo@kazusa.or.jp,
URLihttp://www.kazusa.or.jp/huge, Tel:81-438-52-3913,
                                                                                                                      2259
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VSWTALVHVKAEYFRSLAHYHVAMALCDGSRECPPHLPMVLPRPPRAGLTASLSPSSD
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Prediction of the coding sequences of unidentified human genes.
XXI. The complete sequences of 60 new cDNA clones from brain which code for large proteins
DNA Res. 8 (4), 179-187 (2001)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
CAATGCCTGTCCCCCTCATGCTGGAGGCTGCCTCGGGCACCTGCCCATTAAAGAC
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/db_xref="taxon.9606"
/clone="fj08985"
/tissue_type="brain"
/note="vector:pBluescriptI] {
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/organism="Homo sapiens"
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                                                                                             TGGGAGCGAAGCTGTCACTGTCCCCATGATCCCCCTGGGCCTGAAGGAGACCAAGGAGCT
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DC 20007, USA
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Actin Cytoskeleton
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'note="non-kinase effector protein of RhoA; RhoA-binding
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 2088)
Peck, J.W., Oberst, M., Bouker, K.B., Bowden, E. and Burbelo, F
The RhoA-binding protein, Rhophilin-2, Regulates Actin Cyt
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Submitted (06-MAR-2002) Dept. of Oncology, Georgetown
Medical Center, 3970 Reservoir Rd., N.W., Washington,
Location/Qualifiers
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                                                                                               אנאס אנאס 2088 bp mRNA 1
Homo sapiens rhophilin-1 mRNA, complete cds.
AY082588
                                                                                                                                                                                                                                                                                                                                                                                         Structure and function of Rhophilin homologs Unpublished
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Pred. No. 5.4e-298;
0; Mismatches 0;
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Burbelo, P.D.
                                                                                                                                                                                          Homo sapiens (human)
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Burbelo, P.D.
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Watanabe, G. and Narumiya, S.
Direct Submission
Submitted (13-DEC-1995) Go Watanabe, Phamacology, Kyoto University
of Fac. Med., Yoshida Konoe-Cho Sakyo-Ku, Kyoto City, 606, Japan
Location/Qualifiers
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/function="small GTPase Rho
                                                                                                                             /organism="Mus musculus"
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/db_xref="taxon:10090"
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Watanabe, G., Saito, Y., Madaule, P., Ishizaki, T., Fujisawa, K., Morii, M., Mukai, H., Ono, Y., Kakizuka, A. and Narumiya, S.
Protein kinase N (PKN) and PKN-related protein rhophilin as targets of small GTPase Rho Science 271 (5249), 645-648 (1996)
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	RESULT 8 BC052010 LOCUS BC052010 BC052010 Mus musculus rhophilin, Rho GTPase binding protein 1, mRNA (cDNA clone MGC:6237 IMAGE:5717786), complete cds. ACCESSION BC052010.1 GI:30354356 KEYWORD Mus musculus (house mouse) ORGANISM Mus musculus (house mouse) ORGANISM FULL (as a control of	Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalou, D.K., Muzury, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Fahey, J., Helton, E., Ketteman, M., Wadan, A., Rodrigues, S., Bouffard, G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodrigues, A.C., Gimwood, J., Schmutz, J., Myers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A. Generation and initial analysis of more than 15,000 full-length NGDLINE PUGNAL Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002) MEDLINE PUGNAL Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002) REFERENCE Strausberg, R. IIILE Direct submitssion JOURNAL Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA REMARK NIH-MGC Project URL: http://mgc.nci.nih.gov CONMENT Email: cgapbs-rémail.nih.gov TIRLE CONA Library Preparation: M. Bento Soares, University of Iowa CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LIML) DNA Sequencing by: Sequencing Group at the Stanford Human Genome CENTER: Stanford University School of Medicine, Stanford, CONTACT: Mark) maken Stee: Contact: Mark) mcd@paxil.stanford.edu CONTACT: Stanford University School of Medicine, Stanford, CA 94305 Web site: Contact: (Dickson, Mark) mcd@paxil.stanford.edu Contact: (Dickson, Mark) mcd@paxil.stanford.edu Contact: (Dickson, Mark) mcd@paxil.stanford.edu Contact: (Dickson, Mark) mcd@paxil.stanford.edu Clone distribution: MGC clone distribution information can be found
921 GGGTGCCCTCCACACGCAGATTGGGGCGCCAGGACCGCTCCTGCACGGGGTGCCCG 980	1161 CCAAGACTGCCTGGCCCAGCTGGCGCAGGAGGCCGCCAGGTGTGTT	

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ARLHQQISKELRMRTGAENLYRATSNTWVRETYALELSYVNSNLOLLKEELAELSTSV
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EKGSVLFNIGALHTQIGARQDCSCTEGTNHAARBAFRRAGAFRLLRENFSHAPSPDMS
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HEPLGPTLPQHPEDRRKLGGGAAASHLVQSPAQGGPAAGCGDSGTAALPGQVLTARAR
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/note="HRL; Region: Hrl repeat"
/do xere="CDD:pfam02185"
408 .xe6
/note="BRO1; Region: BRO1-like domain. This functionally uncharacterised domain is found in a number of signal transduction proteins, including Rhophilin and BRO1"
/db_xref="CDD:pfam03097"
through the I.M.A.G.E. Consortium/LINL at: http://image.llnl.gov
Series: IRAK Plate: 114 Row: k Column: 5
This clone was selected for full length sequencing because it
passed the following selection criteria: matched mRNA gi: 6680084.
Location/Qualifiers
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Pred. No. 4.1e-162;
); Mismatches 522; Indels 143;
                                                                                               /organism="Mus musculus"
/mol type="maxA"
/strain="c57BL/6"
/db xref="taxon:10090"
/clone="MGC:62337 IMAGE:5717786"
/tissue type="Brain, mouse 12.5 dpc"
/clone lib="NIH BMAP_FD0"
/lab host="DH10B"
/note="Yector: pXX-ASC"
                                                                                                                                                                                                                                                                                /note="synonym: Rhophilin"
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/db_xref="MGI:1098783"
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/product="Rhpn1 protein"
/protein_id="AAH52010.1"
/db_xref="G1:30354357"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                     38.6%; Score 952.8; DB 6;
llarity 93.2%; Pred. No. 3.5e-147;
Conservative 0; Mismatches 72;
                                                                                                                                                             (518). (1540)

    4729
    /organism="Homo sapiens"
/mol_type="genomic DNA"
    /db_xref="taxon:9606"

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Matches 1018; Conserv
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 4729)
                                                                                                                        2007 GCCCATCCTTGGCTGGAGCGCAAGAATAAACAAGGCAAGCCAGCAGCCTGACCC
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26-FEB-2002 JP 2002049009
OSAMU OHARA, TAKAHIRO NAGASE, DAISUKE NAKAJIMA
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Novel genes and proteins encoded by the genes.
BD183400
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Novel genes and proteins encoded by the ger
Ratent: JP 2002345492-A 113 03-DEC-2002;
KAZUSA DNA RESEARCH INSTITUTE
OS Homo sapiens (human)
PN JP 2002345492-A/113
PP 03-DEC-2002
PP C-FEB-2002 JP 2002049009
PI OSAMU OHARA,TAKAHIRO NAGASE, DAISUKE NI
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Homo sapiens (human)
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/translation="MTDALLPAAPQPLEKESDGYFRKGCNPLAQTGRSKLQNQRAALN
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PSRDEAGVELLMSYFFLGKFYESFFPPFRGMGILFTWFDSITGVPVSQQNLLLEKAS
ILFNIGALYTQ1GTRCMRRTQAGLDGAVDAFQRAAGVLHHLKETFTHTPSYDMSPAML
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DDKTDKTKKTSKKLSFLSWGTDKNRVKSASTLCLPSVGVARPQVKKKLPSPFSLLNSD
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ENI PYSWASLVCVKAHHYAALAHYFAATLLI DHQLKPGADEDHQEKCLSQLYDHMPBG
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                                                                                                                                            Pirson, I.
Direct Submission
Submitted (20-SEP-2001) Pirson I., Interdisciplinary Institute
IRIBHN, Universite Libre de Bruxelles, 1070, Brussels, BELGIUM
AGCAGGCAAGACTGGAGGCTGCCCCAGGCCCTGTGCCCCAGTGAAGCCAGCTCCGCCT
                                                              carcerrandecacededegegegegegegegegegenegarecergenegegegegege
                                                                                                          CATCCTTGAAGCACCCAGGGTGGCCGTGAGGCCCAGGATCCCTGCACGCCCTCAGCCCTG
                                                                                           Mircescu, H., Steuve, S., Savonet, V., Degraef, C., Mellor, H.,
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Identification and characterization of a novel activated binding protein containing a PDZ domain whose expression specifically modulated in thyroid cells by CAMP Bur. J. Biochem. 269 (24), 6241-6249 (2002)
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AJ347749.1 GI:23304859
p76RBE protein.
Canis familiaris (dog)
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/db_xref="taxon:9615"
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DB 4;
Score 558.8; DB 4
Pred. No. 2.8e-82;
22.6%;
59.0%;
Query Match
Best Local Similarity 59.0
Matches 1019; Conservative
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1 (bases 1 to 764)
Williams, L.T., Escobedo, J., Innis, M.A., Garcia, P.D., Klinger, J.S., Reinhard, C., Giese, K., Randazzo, F., Kennedy, G.C., Pot, D., Kassam, A., Lamson, G., Drmanac, R., Crkvenjakov, R., Dickson, M., and Crain, B.S.
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 1455 GCTGGAGGAGCGCAGCTTGGCAAGGCACACCTGAAGCGTGCCATCCTGGGGAA
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PI BIRAJIT STACHE CRAIN
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RADOMIR CRKVENJAKOV, MARK DICKSON, SNEZANA DRMANAC, IVAN LABAT,
DENA LESHKONITZ, DAVID KITA, VERONICA GARCIA, LEE WILLIAM JONES,
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C12N1/21,C12N5/10,C12Q1/68,C12N15/00,C12N5/00,C12N15/00
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21.2%; Score 524.6; DB 6;
Best Local Similarity 92.6%; Pred. No. 1.5e-76;
Matches 601; Conservative 0; Mismatches 39;
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/organism="Homo sapiens"
/mol type="genomic DNA"
/db_xref="taxon:9606"
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Location/Qualifiers
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1576. 1809
| note="PDZ; Region: Domain present in PSD-95, Dlg, and ZO-1/2. Also called DHR (Dlg homologous region) or GLGF (relatively well conserved tetrapeptide in these domains). Some PDZs have been shown to bind C-terminal polypeptides | /db_xref="CDD:smart00228"
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/note="BRO1; Region: BRO1-like domain. This functionally
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'note="Vector: pBluescript"
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/product="rhophilin-like
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367.,825
                                                                                                                                                                                                                                                                                             /protein_id="AAH36447.1"
/db_xref="G1:22209019"
                                                                                                   /note="synonym: p76RBE"
/db_xref="LocusID:85415"
                                                                       /qene="RHPN2"
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Best Local S:
Matches 977
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1E 1 (bases 1 to 3516)

Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, P.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Scheefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.L., Wang, J., Hsieh, F.,
Diatchenko, L., Maruslana, K., Earmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Banaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Morley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Butterfield, Y.S., Kazywinski, M.I., Skalska, U., Smailus, D.E.,
Schnerch, A., Schein, J.E., Jones, S.J. and Marza, M.A.,
Generation, and mittial analysis of more than 15,000 full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at: http://image.llnl.gov Series: IRAK Plate: 34 Row: j Column: 22 This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 23510298. Location/Qualifiers
                                                                                                                                                      BC036447 3516 bp mRNA linear PRI 08-OCT-2003 Homo sapiens rhophilin, Rho GTPase binding protein 2, mRNA (cDNA clone MGC:26769 IMAGE:4830913), complete cds.
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Submitted (09-AUG-2002) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: cgapbs-remail.nih.gov
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
CDNA Library Preparation: Michael J. Brownstein (NHGRI) & Shira
Toshiyuki and Piero Carninci (RIKEN)
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing by: Institute for Systems Biology
http://www.systemsbiology.org
contact: amadandsystemsbiology.org
Anup Madan, Jessica Fahey, Erin Helton, Mark Ketteman, Anuradha
Madan, Stephanie Rodrigues, Amy Sanchez and Michelle Whiting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
HIM-MGC Project URL: http://mgc.nci.nih.gov
On Sep 16, 2003 this sequence version replaced gi:22209018.
Contact: MGC help desk
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Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
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/db xref="taxon:9606"
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AUTHORS
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344

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404

464 740 524

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PSRDREAGVELLMYFT IOLGFVESRFPPPTROMGILFTWYDSLTGVPVSQONLLIEKAS
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KWITLSEVWKLLKSFGEDBEIEMKVVSLLDSTSSMHNKSATYSVGMQKTYSMICLAIDD
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SSNY"
               AGAAGAAGGGGACTTGGGGGTCACCTTGAGAGGGAACGCCCCCGTTCAGGTTCACTTCCT 1658
                                                                                                                                 GGATCCTTACTGCTTGCCTCGGTGGCAGGAGCCCCGGGAGGAGGAGTTATATTGTCTCCAT 1718
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                                                                                                                                                                                        GAATGGGCAGCCATGCAGGTGGTGGAGACACGCGGAGGTGGTGACGGAGCTGAAGGCTGC 1994
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
                                                                      CATTCCAGGGAGCCAGGCGGCGGCTGGCCTGAAGGAGGCGACTACATTGTGTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (20-SEP-2001) Pirson I., Interdisciplinary Institute IRIBHN, Universite Libre de Bruxelles, 1070, Brussels, BELGIUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mircescu, H., Steuve, S., Savonet, V., Degraef, C., Mellor, H., Dumont, J.E., Maenhaut, C. and Pirson, I.
Identification and characterization of a novel activated Rhc binding protein containing a PDZ domain whose expression is specifically modulated in thyroid cells by cAMP Eur. J. Biochem. 269 (24), 6241-6249 (2002)
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Homo sapiens mRNA for p76RBE protein.
AJ347750
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Homo sapiens (human)
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Research Association for Biotechnology
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Isogai,T. and Yamamoto,J.
Direct Submission
Submitted (04-7UL-2002) Takao Isogai, FLJ Project (HRI Team); 2-6-7
Kazusa-Kamatari, Kisarazu, Chiba 292-0812, Japan
(E-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986)
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      NEDO human cDNA sequencing project supported by Ministry of Economy, Trade and Industry of Japan; cDNA full insert sequencing: Research Association for Biotechnology (RAB); cDNA library construction: Helix Research Institute (HRI) (supported by Japan Key Technology Center etc.); 5'- & 3'-end one pass sequencing: RAB, HRI, and Biotechnology Center, National Institute of Technology and Evaluation; clone selection for full insert sequencing: HRI and RAB; annotation: HRI and RAB.
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AL578313 AL578313
                                                                          July 12, 2004, 20:25:00 ; Search time 4177.82 Seconds (without alignments) 17647.909 Million cell updates/sec
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                                                                                                                              Description
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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                           27513289 seqs, 14931090276 residues
                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
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Maximum Match 100%
Listing first 45 summaries
                                               OM nucleic - nucleic search, using sw model
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13 BX444630
13 BX447754
9 AL578313
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BQ072325 BC012135 BU171128 CA432432	BX341691 BX375208 BX405203	CB851/22 CB850862 BU629871	BX384556 BM928275	CD513476 BG339711	AI917311 AK004849	AK050214 BI518788	BI770906 BE328691	BM548005 BI103148	AW874410	AW295415	BQ880416 BM193145	BM153139	BE408252 CB216237	AI624807	BQ179567 BF607519	BM475275	BF348343 AA292035	BX444631	BQ442874 BQ927119		ALIGNMENTS	1070 bp	Homo sapiens HELA CELLS ne CSODKO04YEO5 3-PRIME,	35			ates;	ee,J. ев and	National de S Redex - France	segref@genoscope.cns.fr, Web : www.y was constructed by Life Technologiogen. This sequence belons to sequence	this clust ns.fr/	<pre>cgi-bin/cluster.cgi?seq=CSODK004 Feng Liang Email : fliang@lifete http://fulllength.invitrogen.com</pre>
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BP 191 91006 EVRY cedex - France
BP 191 91006 EVRY cedex - France
Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 4751.f For
more information about this cluster, see
http://www.genoscope.cns.fr/
cgi.bin/cluster.cgi?seq=CSODN004CD07NP1&cluster=4751.f. Contact :
Feng Liang Email: fliang@lifetech.com URL :
http://fulllength.invitrogen.com/ InvitroGen 0.0cporation 1600
Faraday Avenue Genoscope sequence ID : CSODN004CD07NP1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /Lisaue type="ADDUT BRAIN"
/dev_stage="adult"
/dev_stage="adult"
/clone lib="Momo sapiens ADULT BRAIN"
/note="Organ: Prain; Vector: pCMVSPORT 6; 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and ECORV sites of the pCMVSPORT 6 vector. Library was not normalized."
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1017)

1 (hases 1 to 1017)

Full-length convaliation ormalization
Unpublished (2001)

Contact: Genoscope
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llarity 99.5%; Pred. No. 5.3e-90;
Conservative 0; Mismatches 0;
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/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODNO04YH13"
                                                                                                                                                                                                                     CCCGCCTCATGCTGGAGGC 2389
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                                                                                                                                                                             /clone_lib="Homon sapiens HELA CELLS COT 25-NORMALIZED"
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primer: Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
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              : CSODKO04AC03NP1
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/cell_line="HELA"
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/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODK004YE05"
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Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
Email: seqref@genoscope.cns.fr
was not normalized. Library was constructed by Life Technologies, a
division of Invitrogen. This sequence belongs to sequence cluster
4751.f For more information about this cluster, see
http://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?seq=CSOAH001CB05ND1&cluster=4751.f. Contact :
Feng Liang Email : fliang@lifetech.com URL :
http://fullength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CSOAH001CB05NP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="CSOBHOLYDD9"
/tissue type="T CELLS (JURKAT CELL LINE)"
/tissue type="T CELLS (JURKAT CELL LINE)"
/clone lib="Homo sapiens T CELLS (JURKAT CELL LINE)"
/note="Vector: PCMVSPORT 6; 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and ECRNV sites of the pCMVSPORT 6 vector. Library was not normalized."
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/mol_type="mRNA"
/db_xref="taxon:9606"
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Li, W.B., Gruber, C., Jessee, J. and Polayes, D. Full-length cDNA libraries and normalization
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Contact: Genoscope
Genoscope - Centre National de Sequencage
Genoscope - Centre National de Sequencage
BP 191 91006 ENY cedex - France
Email: seqrefégenoscope.cns.fr, Web : www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 4751.f For
more information about this cluster, see
http://www.genoscope.cns.fr/
cgi.bh/Cluster.cgi?seq=CSODKO10BGO2NPl&cluster=4751.f. Contact :
Feng Liang Email: fliange@lifetech.com URL :
http://fulllength.invitrogen.com/ InvitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CSODKO10BGO2NPl.

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AL578313 Homo sapiens HELA CELLS COT 25-NORMALIZED Homo sapiens CDNA clone CSODKO10YM04 3-PRIME, mRNA sequence.
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/note="list strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and ECOR V
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1 (bases 1 to 1201)

1 (Jule, Gruber, C., Jessee, J. and Polayes, D.

Full-length cDNA libraries and normalization
Unpublished (2001)

On Peb 16, 2001 this sequence version replaced gi:12942264.
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/cell type="HELA CELLS COT 25-NORMALIZED"
/cell_line="HELA"
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1. (bases 1 to 1135)

2. Strauberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Altschul, S.F., Zeeberg, B. Butcher, C.M., Schuler, G.D., Altschul, S.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F., Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L., Staplecon, M., Soares, M. B., Bonaldo, M.F., Casavant, T.L., Scheetz, T.E., Brownstein, M.J. Usdin, T.B., Toshiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Malek, J.A., Gunatane, P. H., Richards, S., Maron, D.M., Sodergren, R.J., Lu, X., Gibbs, R.A., Faley, T., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whiting, M., Sodergren, R.J., Lu, X., Gibbs, R.A., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schwutz, J., Myers, R.M., Butceffield, Y.S., Krzywinski, M.I., Salska, U., Sanilus, D.E., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A., Schein, J.E., Jones, S.J. and Marra, M.A., Manny, D. M., Sodergren, D., Sanilus, D.E., Generation and initial analysis of more than 15,000 full-length human and monine cDNA sequence.
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1135 bp mRNA linear HTC 19-NOV-2003
Homo sapiens rhophilin, Rho GTPase binding protein 1, mRNA (cDNA
clone IMAGE:4555079), with apparent retained intron.
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Submitted (02-AUG-2001) National Institutes of Health, Mammalian
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Proc. Natl. Acad. Sci. U.S.A.
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/foloe="Organ: pooled lung and spleen; Vector: pcWV-SPORT6; Site_1: NotI; Site_2: EcoRV (destroyed); RNA source anonymus pool of 24 week female lung, 16 week female spleen, and 20-22 week male spleens. Library is oligo-drupined and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.4 kb, insert size full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 026. Note: this is a NIH_MGC Library."
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1001)
                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llh.gov
blate: LLAMI2810 row: b column: 21
High quality sequence stop: 623.
Location/Qualifiers
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                                                                                                                                                          NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
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Similarity 96.4%; Pred. No. 1.9e-84;
54; Conservative 0; Mismatches 26
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/organism="Homo sapiens"
/mol_type="mRNN"
/db_xref="taxon:9606"
/clone="IMAGE:5761460"
/lab_host="DH108"
                                                   sapiens (human)
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_7935660 NIH_MGC_67 Homo mapiens cDNA clone IMAGE:6146655
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GAATGAGTCGGGCCTGGAGCTGCTCACAGCCTATTACAACCAGCTGTGCTTCCTGGATGC 641
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NH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
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/lab host="MH10B (phage-resistant)"
/lab host="NIH MGC_GT)
/lone="Organ: ey; Vector: pCNV-SPORT6; Site_1: NotI;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo
Average insert size 1.75 kb. Library constructed by
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CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAMI3475 row, d column: 16
High quality sequence stop: 563.
Location/Qualifiers
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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/clone="IMAGE:6146655"
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5', mRNA Sequence.
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BU171128.1 GI:22685112
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This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 19882236 This clone has the following problem: retained intron.
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                                                                                                                                                                                                                                                                                                                                                      Steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butterfield, Susanna Chan, Readman Chiu, Chris Fjell, Erin Garland, Ran Guin, Eletticia Heisao, Martin Krzywinski, Reta Kutsche, Oliver Lee, Soo Sen Lee, Victor Ling, Carrie Mathewson, Candice Mcheavy, Steven Ness, Pawan Pandoh, Anna-Liisa Prabhu, Parvaneh Saeedi, Jacqueline Schein, Danas Smailus, Michael Smith, Lorraine Spence, Jeff Stott, Michael Thorne, Miranada Tsai, Natasja van den Bosch, Jill Vardy, George Yang, Scott Zuyderdunn, Marco Marra.
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         3ene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Genome Sequence Centre,
BC Cancer Agency, Vancouver, BC, Canada
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/organism="Homo sapiens"
/organism="Homo sapiens"
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/lab host="DH10B-R"
/note="Vector: pOTB7"
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                                                                                                     NIH-MGC Project URL: http://mgc.nci.nih.gov
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                                                                                                                                                             Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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ilarity 99.9%;
Conservative
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/ Organisms = manowo sapiens ...
/ wol type="makna"
/ db_xref="taxon:9606"
/ clone="U1-Fil-bgu-e-15-0-UI"
/ tissue_type="Cell lines"
/ dev_stage="Adult"
/ lab host="MID10B (Life Technologies)"
/ lab host="MID10B (Life Technologies)"
/ lone="Organ: Chondrosarcoma; Vector: pT7T3-Pac
/ lone lib="NCI CGAP_FILIs a normalized CDNA library
derived from a modified polylinker; Site_1: EcoR I;
Site_2: Not I; NCI CGAP_FILIs a normalized CDNA library
derived from a pool of mRNA obtained from 4 cell lines
from grade III chondrosarcoma tissues. The library was
constructed according to Bonaldo, Lennon and Soares,
Genome Research, 6:791-806, 1996. First strand cDNA
synthesis was primed with an oligo-dT primer containing a
Not I site. Double stranded cDNA was ligated to an EcoR I
adaptor, digested with Not I; and cloned directionally
into pT7T3-Pac vector. The oligonucleotide used to prime
the synthesis of first-strand cDNA contains a library tag
sequence that is located between the Not I site and the
(dT)18 tail. The sequence tag for this library is
GAGGTCGGTG. The cell lines were provided by Dr. James
markin from the University of Lowa.

"AC TISCUP-Livear Change Company 
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: James Martin
cDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
clone Distribution: Clone distribution information can be obtained
from Dr. M. Bento Soares, bento-soares@ulowa.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2036
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TAG_SEQ=GAGGTCGGTG"
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Best Local Similarity
Matches 775; Conserva
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UI-H-FL1-bgu-e-15-0-UI.s1 NCI CGAP FL1 Homo sapiens cDNA clone
UI-H-FL1-bgu-e-15-0-UI 3', mRNA sequence.
                                                                                                                                                                                                             CCAGCCACCCGTCCACGACTACGTGCCTGTCCTGGACTGCCTGGTGCATGTCAAGGC 1304
                                                                                                                                                                                                                                                                                                                     CGAGTACTTCCGCTCCCTGGCCCACTACCACGTAGCCATGGCCCTCTGCGACGGCTCCCC 1364
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 775)
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National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                      GTTTGAGGCCTCTCACCACCTCCTCCATGGCCCCCCCAAGACTGCCTGGCCCAGCTGCC
                                                                                                  CCTGGCGCAGGAGGCCGCCCAGGTGGCAGCCGAGTACAGGCTAGTGCACCGGACCATGGC
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VERSION KEYWORDS SOURCE ORGANISM

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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1127)
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/note="1st strand cDNA was primed with a NotI-oligo(dr)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR v
sites of the pCMVSPORI 6 vector. Library was normalized.
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                                    357 TCTAAGGAGCAGAGGAGCATGCATGCAAGACCCCGGCATCCACGTGGGCCACTCCCCG
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BX341691
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/cell_line="HELA"
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/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CSODK004YE05"
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1201)
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                                                                                    CCTGCAGCTGCTGAAGGAGGAGCTGGAGGAGCTCAGCGGTGGCGTGGACCCTGGCCGGCA
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Homo sapiens
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/do folio="CSODHOUIVDO"
/clone="CSODHOUIVDO"
/tissue TCSODHOUIVDO"
/clone lib="JURKAT CELL LINE"
/clone lib="Homo sapiens T CELLS (JURKAT CELL LINE)"
/note="Voctor: pCWVSPORT 6; lst strand cDNA was primed with a NotI-olide"
/with a NotI-olide"
/clone lib="tand contine"
/clone lib="tand cont
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                                                                                               822 CGGTGCCCTCCACACGCAGATTTGGGGCGCCCAGGACCGCTCCTGCACCGAGGGTGCCC 881
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1201 bp mRNA linear EST 13-MAY-2003
BX405203 Homo sapiens T CELLS (JURKAT CELL LINE) Homo sapiens CDNA
clone CSODH001YD09 5-PRIME, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     270 AGATTGACAAGGAGCTGCAGATGCGGACGGCGCTGAGAACCTCTACAGAGCCACCAGCA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                389 AGATTGACAAGGAGCTGCAGATGCGGACGGGGGGGAAACCTCTACAGAGCCACCAGCA 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1201)
Li, W.B., Gruber, C., Jessee, J. and Polayes, D.
Full-length cDNA libraries and normalization
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                For
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                329 ACTOCOTGACGOAGATOCAGTGCGGCCAGCTGCAGAGCCGCAGGCCCAGATTCACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     http://www.genoscope.cns.fr/
cgi.bin/cluster.cgi?seq=cS0AH001CB05QP1&cluster=4751.f. Contac
Feng Liang Email: filang@lifetech.com URL http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CS0AH001CB05QP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
Email: seqref@genoscope.cns.fr, Web : www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 4751.f
more information about this cluster, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29.0%; Score 715.8; DB 13; Length 1201; 91.9%; Pred. No. 2.1e-74; cive 6; Mismatches 13; Indels 54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGATGGCCCAGGCATGTGTGTTTGAGGCCTCTCACC 1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Library was not normalized.
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BX405203.1 GI:30635313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (human)
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Best Local S:
Matches 824
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AUTHORS
TITLE
JOURNAL
COMMENT
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KEYWORDS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue type="NEUROBLASTOMA COT 25-NORMALIZED"
/clone_lib="Homo sapiens NEUROBLASTOMA COT 25-NORMALIZED"
/note="lst strand cDNA was primed with a NotI-oligo (dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and ECRR V
sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              282
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                                                                                                                                                       Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
BM 211 91006 EVRY cedex - France
Email: seqrefégenoscope.cns.fr ' et n' et 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     223 GGGCTGTGACTCCCTGACGCAGATCCAGTGCGGCCAGCTGCAGAGCCGCAGGCCCAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      283 TCACCAGCAGATTGACAAGGAGCTGCAGATGCGGACGGGCGCTGAGAACCTCTACAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACCAGCAACAACGGGTGAGAGAGGGTCGCCCTGGAGCTGAGCTACGTCAACTCCAA
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Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Unpublished (2001)
Contact: Genoscope
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/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CS0DC010YG11"
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Best Local Similarity 94.5*
Matches 778; Conservative
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                                      CB851722 703 bp mRNA linear EST 22-APR-2003 UI-CF-EN1-aek-a-17-0-UI-SI UI-CF-EN1 Homo sapiens CDNA clone UI-CF-EN1-aek-a-17-0-UI 3', mRNA sequence.
                                                                                                                                                                     Homo sapiens
Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 703)
Bonaldo,M.F., Lennon,G. and Soares,M.B.
Normalization and subtraction: two approaches to facilitate gene
                                                                                                                                                                                                                                                                                                     (9), 791-806 (1996)
                                                                                                                  CB851722.1 GI:30046513
                                                                                                                                                       Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                             Contact: McCray, PB
                                                                                                                                                                                                                                                                                   discovery
Genome Res. 6 (
97044477
                                                                                                   CB851722
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ORGANISM

JOURNAL MEDLINE PUBMED

COMMENT

REFERENCE AUTHORS TITLE

CB851722/c LOCUS DEFINITION

ACCESSION VERSION KEYWORDS

RESULT 12

2166

2106

346

2046

406

1986

466

526

/dev stage="Adult"
//dev stage="Adult"
//lab host="DH10B (Life Technologies) (T1 phage resistant)"
//clone 11b="UI-CF-ENI"
//clone 11b="UI-CF-ENI"
//note="Organ: Lung; Vector: pT773-Pac (Pharmacia) with a
modified polylinker; Site_1: EcoR I; Site_2: Not I;
UI-CF-ENI is a normalized cDNA library contening the
following tissue(s): Primary Lung Cystic Fibrosis
Epithelial Cells. The library was constructed according to
Bonaldo, Lennon and Soares, Genome Research, 6:791-806,
1996. First strand CDNA synthesis was primed with an
oligo-dT primer containing a Not I site. Double stranded
cDNA was ligated to an EcoR I adaptor, digested with Not
I, and cloned directionally into pT773-Pac vector. The
oligonucleotide used to prime the synthesis of
first-strand cDNA contains a library tag sequence that is
located between the Not I site and the (dT)18 tail. The
sequence tag for this library is CTGCTCAGGT.
TAG_SEQ=None found" 1866 1926 Э, 646 586 University of Iowa
2024 University of Iowa Med Labs, Iowa City, IA 52242, USA
Tel: 319 316 4866
Fax: 319 356 4866
Fax: 319 350 7171
Email: paul-mccray@ulowa.edu
Trisue Procurement: Dr. M. J. Welsh, University of Iowa
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
CLONE Distribution: Researchers may obtain clones from Research
Genetics (www.resgen.com) or from Open Blosystems
(www.openblosystems.com). 1747 CTGGGGCCCCTGTCTGTGTTCTCAGCCAAGAACCGGTGGCGCCTGGTGGGGCCCGTCCAC CAGGGCCCCTGTCTGTG-TCTCAGCCAAGAACCGGTGGCGGCTGGT-GGGCCCGTCCAC CTGACCCGAGGAGGGCGGCTTTGGCCTCACGCTTCGGGGAGACTCGCCTGTCCTCATC 645 creacceaseasasasescerrirescercacerressasasercecerereare GCTGCCGTCATTCCAGGGAGCCAGGCCGCGGCGGCTGGCCTGAAGGAGGAGGACTACATT 1. .703
/organism="Homo sapiens"
/mol type="mRNA"
/db xref="taxon:9606"
/clone="UI-CF-EN1-aek-a-17-0-UI"
/tissue_type="Frimary Lung Cystic Fibrosis Epithelial Gaps э , Length 703; Indels DB 14; 3; 26.9%; Score 665.2; DB llarity 99.2%; Pred. No. 2e-68; Conservative 0; Mismatches Location/Qualifiers Seg primer: M13 FORWARD POLYA=Yes.

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GI:23296343
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/lab_host="DH10B (Life Technologies) (Tl phage resistant)"
/lab_host="DH10B (Life Technologies) (Tl phage resistant)"
/lote="Organ: Lung; Vector: pT7T3-Pac (Pharmacia) with a modified polylinker; Site 1: EcoR I; Site 2: Not I; Ul-CF-EN1 is a normalized CDNA library containing the following tissue(s): Primary Lung Cystic Fibrosis
Epithelial Cells. The library was constructed according to
                                                                                              GTGAAGCCAGCTCCGCCCTCATCCTTGAAGCACCCAGGGTGGCCGTGAGGCCCAGGATCC 2286
                                                                                                                                                                                                                           AGAGGACCTCCGGGCAATGCCTGTCCCGCCTCATGCTGGAGGCTGCCTCGGGCACCTGCC 2406
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2024 University of Iowa
2024 University of Iowa Med Labs, Iowa City, IA 52242, USA
Tel: 319 356 4866
Fax: 319 356 7171
Email: paul-mccray@uiowa.edu
Tissue Procurement: Dr. M. J. Welsh, University of Iowa
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
ONA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Researchers may obtain clones from Research
CAGAGGGAGCATGGTAGCAAGACCCCGGCATCCACGTGGGCCCAGTCCCCGGCCCCTCCTC 286
                                                                226
                                                                                                               CTGCACG-CCTCAGCCCTGGCTCCAGCTGGCAGCAACCAAGCACCAAGCCCTCCCCCACCC 107
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Bonaldo,M.F., Lennon,G. and Soares,M.B.
                                                                                                                                                                                                                                            106 AGAGACCTCCGGGCAATGCCTGTCCCGCCTCATGCTGGAGGCTGCCTCGGGCACCTGCC
                              AACTGGAGCCGAAAGGCCCCAGCAGGCAAGACTGGAGGCTGCCCCAAGCCCTGTGCCCCCA
                                                            AACTGGAGCCGAAAGGCCCAGGGCAAGACTGGAGGCTGCCCCCAGCCCTGTGCCCCA
                                                                                                                                                           CTGCACGCCTCAGCCCTGGCTCCAGCTGGCAAGCACCGAGCATGCCCTCCCCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="Ul-CF-EN1-adb-i-17-0-UI"
/tisue_type="Primary_Lung_Cystic_Fibrosis_Epithelial
                                                                                                                                                                                                                                                                                                                                                                                                          CB850862
UI-CF-EN1-adb-i-17-0-UI.81 UI-CF-EN1 Homo sapiens cDNA clone
UI-CF-EN1-adb-i-17-0-UI 3', mRNA sequence.
                                                                                                                                                                                                                                                                                          Н
                                                                                                                                                                                                                                                                                                           organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genome Res. 6 (9), 791-806 (1996)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genetics (www.resgen.com).
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POLYA=Yes.
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Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded cDNA was ligated to an EcoR I adaptor, digested with Not I, and cloned directionally into pT7T3-Pac vector. The oligonucleotide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is sequence tag for this library is CTGCTCAGGT.
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                                                                                                                                                                                                                                                                                                                         26.9%; Score 665; DB 14; 98.7%; Pred. No. 2.1e-68;
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1 (bases 1 to 1201)

Li, W.B., Gruber, C., Jessee, J. and Polayes, D.
Full-length cDNA libraries and normalization
Unpublished (2001)
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Genoscope - Centre National de Sequencage
BP 191 91006 ERRY cedex - France
BP 191 91006 ERRY cedex - France
Email: seqref@genoscope.cns.fr, Web : www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Linvitrogen. Contact : Feng Liang Email : fliang@lifetech.com URL
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CSODKOIIBGOSQPI.
Location/Qualifiers
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/clone_lib="the strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime and enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR v
sites of the pCMVSPORT 6 vector. Library was normalized.
                                                                                                                                                                                                                                         230 GAAGCCAGCTCCGCCCTCATCCTTGAAGCACCCAGGTGGCCGTGAGGCCAGGATCCCT
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GAGGGAGCATGCTTGCAAGACCCCGGCATCCACGTGGGCCAGTCCCCGGCCCCTCCTCAA
                                 GAGGGAGCATGCTTGCAAGACCCCGGCATCCACGTGGGCCAGTCCCCCGGCCCTCAA
                                                                                                                                    170 GCACG-CCTCAGCCCTGGCTCCAGCTGGCAGCAAGCACCGAGCATGCCCTCCCCACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   365 AASTTCNACTGTCCCCATGATCCCCCTGGGCCTGAAGGAGACCAAGGAGACTGGACTGGTC
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                                                                                                        CTGGAGCCGAAAGGCCCAGCAGGCAAGACTGGAGGCTGCCCCCAGCCCTGTGCCCCAGT
                                                                                                                                                                                                                GAAGCCAGCTCCCCCTCATCCTTGAAGCACCCAGGGTGGCCGTGAGGGCCCAGGATCCCT
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/cell_line="HELA"
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Larity 97.3%; Pred. No. 9.5e-64;
Conservative 4; Mismatches 11;
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/db_xref="taxon:9606"
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Homo sapiens
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                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.inh.gov
Tissue Procurement: James Martin
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Clone distribution information can be obtained
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NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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Seq primer: M13 FORWARD
POLYA-Yes.
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/organism="Homo sapiens"
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Best Local Similarity 98.6%;
Matches 642; Conservative (
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1: /cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*
2: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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9 US-09-853-301-174

15 US-10-023-896-43

16 US-10-12-944-558

16 US-10-239-607-51

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ALIGNMENTS

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### APPLICATITE RUSCH, Douglas et al
### TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
### TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS,
### TITLE OF INVENTION: THEREOF
### CURRENT APPLICATION NUMBER: US/10/697,266
### CURRENT APPLICATION NUMBER: 10/274,878
### PRIOR PILING DATE: 2003-10-31
### PRIOR FILING DATE: 2001-05-07
### PRIOR FILING DATE: 2001-02-01
### NUMBER OF SEQ ID NOS: 4
### SEQ ID NO 1
### IEBNGTH: 2469
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                      Sequence 1, Application US/10697266
Publication No. US20040067522A1
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Best Local Similarity 100.
Matches 2469; Conservative
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                                                                       GENERAL INFORMATION:
US-10-697-266-1
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	SULT 2 10-274-878-1 10-274-8	100.0%; Score 2469; DB 15; Length 2469;	ACCC ACCC TIGCG TIGCG	
Db 2281 GGATCCTGG Qy 2341 CCACCCAGA Db 2341 CCACCCAGA Qy 2401 CCTGCCTGC Qy 2401 CCTGCCTGC Qy 2401 CTGCCTGC Qy 2461 AAAAAAAA Db 2461 AAAAAAAAA	RESULT 2 US-10-274-878-1 Sequence 1, Application US/10274878 Publication No. US20030049792A1 GENERAL INFORMATION: APPLICANT: RUSCH, bouglas et al TITLE OF INVENTION: ISOLATED HUMAN KII TITLE OF INVENTION: ACID MOLECULES ET TITLE OF INVENTION: ACID MOLECULES ET TITLE OF INVENTION: ISOLATED HUMAN KII TITLE OF INVENTION: ACID MOLECULES ET TITLE OF INVENTION: THEREOF CURRENT APPLICATION NUMBER: US/10/274 CURRENT FILING DATE: 2001-02-2 PRIOR PELING DATE: 2001-02-3 PRIOR FILING DATE: 2001-02-07 PRIOR FILING DATE: 2001-02-07 PRIOR FILING DATE: 2001-02-01 NUMBER OF SEQ ID NOS: 4 SOFTWARE: PastSEQ for Windows Version SEQ ID NO 1 LENGTH: 2469 TTYRE: DNA TTYRE: DNA TTYRE: DNA TTYRE: DNA TTYRE: DNA TTYRE: DNA TTYRE: Human	Query Match 100 Best Local Similarity 100 Matches 2469; Conservative Conservative Qy 1 TCGGGCCCAGGTGG Db 1 TCGGGCCCAGGTGG Qy 61 GCTGGCTGACCCGAC Qy 61 GCTGGCTGACCCGAC Db 61 GCTGGCTGACCCCGAC	Oy 121 CCGGACGGC Db 121 CCGGACGGC Oy 181 AGGAAAACA Db 181 AGGAAAACA Oy 241 TGGAGAGGGG	Db 241 TGGAGGGGG Qy 301 AATCCGCAGG Db 301 AATCCGCAGG Oy 361 CAGAGCCGGG Db 361 CAGAGCCGGG Oy 421 GCTGAGGACG

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NAME/KEY: misc feature; OTHER INFORMATION: Incyte ID No. US20040038267A1 5560161CB1
US-10-451-207-11
                                                                                                                                                                           APELICANI: MARKEN, BIDGGE A.
APELICANI: KHAN, Y. Tom
APELICANI: KHAN, Farrah A.
APELICANI: KHAN, Farrah A.
APELICANI: ANG, Y. Tom
APELICANI: ANG, Monique G.
APELICANI: FOR MONIQUE G.
TITLE OF INVENTION: INTRACELLULAR SIGNALING MOLECULES
FILE REFERENCE: PF-0868 USN
CURRENT APELICATION NUMBER: US/10/451,207
CURRENT FILING DATE: 2003-06-18
PRIOR APELICATION NUMBER: PCT/US01/50315
PRIOR APELICATION NUMBER: US 60/257,804
PRIOR FILING DATE: 2000-12-21
PRIOR FILING DATE: 2000-12-21
PRIOR FILING DATE: 2000-12-21
PRIOR FILING DATE: 2000-10-05
NUMBER OF SEQ ID NOS: 18
                                    THORNTON, Michael B. CHAWLA, Narinder K. GANDHI, Ameena R. BARVIZU, Chandra S. BACHZU, Chandra R. SWARNAKAR, Anita DUGAN, Brendan M. LU, Dyung Aina M. THANGANELU, Kavitha WARREN, Bridget A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 85.3
Best Local Similarity 100.
Matches 2116; Conservative
BURFORD, Neil
                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Homo sapiens
            DING, Li
YUE, Henry
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Sequence 11, Application US/10451207
Publication No. US20040038267A1
GENERAL INFORMATION:
APPLICANT: INCYTE GENOMICS, INC.

1881 AGGAGCCAGGCGGCGCCTGAAGGAGGCGACTACATTGTGTCAGTGAATGG 1940	1981 TTGCAAGACCCGGCATCCACGTGGGCCCCTCCTCCAACTGGAGCCGAAA 2181 GGCCCAGCAGGCAAGACTGGAGGCGCCCTCCTCCAACTGGAGCCGAAA 2081 GGCCCAGCAGGAGAAGACTGGAGGCTGCCCCAGCCCTGTGCCCCAGTGAAGCCAGCTCC 2041 GGCCCAGCAGGGCAAGACTGGAGGCTGCCCCAGGCCTGTGCCCCAGTGAAGCCAGCTCC 2241 GCCCTCATCCTTGAAGCACCCAGGTGGCCGTGAGGACCCTGGATGCCCTCAG 2101 GCCTCATCCTTGAAGCACCCAGGGTGGCCGTGAGGACCAGGATCCCTCCAGGGTCCTCAG 2101 GCCTCATCCTTGAAGCACCCAGGGTGGCCGTGAGGACCCAGGATCCCTCCC	Db 2160 CCCTGGCTCCAGCAGCAAGCACCCAGCCTCCCCCACCCAGAGGACGCGGG 2219 Qy 2361 CAATGCCTGTCCGCCTCATGCTGGAGGCTCCCTCGCCTGCCT	RESULT 4 US-10-112-944-74 Sequence 74, Application US/10112944 Sequence 74, Application US/10112944 Sequence 74, Application WS/10112944 Senemal INFORMATION: APPLICANT: Tang, Y. Tom APPLICANT: Wang, Yonghong APPLICANT: Ren, Felyan APPLICANT: Zhang, Jie APPLICANT: Ken, Felyan APPLICANT: Weng, Jian-Rui APPLICANT: Weng, Jian-Rui APPLICANT: Wehrman, Tom APPLICANT: Wehrman, Tom APPLICANT: Wehrman, Tom APPLICANT: Wang, Jian-Rui APPLICANT: Wang, Dunrui	# APPLICANT: Zhao, Qing A. # APPLICANT: Wang, Zhiwei. # TITLE OF INVENTION: No. US20040048249Alel Nucleic Acids and TITLE OF INVENTION: Secreted Polypeptides # TITLE OF INVENTION: Secreted Polypeptides # FILE REFERENCE: 805A # CURRENT APPLICATION NUMBER: US/10/112,944 # CURRENT FILING DATE: 2002-03-28 # PRIOR APPLICATION NUMBER: US 09/481,725 # PRIOR APPLICATION NUMBER: US 09/491,404 # PRIOR PILING DATE: 2000-01-21 # PRIOR APPLICATION NUMBER: US 09/496,914 # PRIOR APPLICATION NUMBER: US 09/515,126 # PRIOR APPLICATION NUMBER: US 09/515,126 # PRIOR APPLICATION NUMBER: US 09/519,705 # PRIOR APPLICATION NUMBER: US 09/519,705
TCGCTTAC CGCTTAC CGCTTAC CGCTTAC CGCTTAC CGCCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGC	CCAAGACTGGGCCGAGCCTGGCGTCCCTCTGCGACTGGAGCTGCTGTTGTTTTTTTT		1401 CTTCCTGCAGCCCCCCCCTCTAAGCCCCGAGGCCCTGTGCTGCCGCAGGAGCTGA	1641 CTGTGAGGCTGCCGGACATCCAGCCTAAGACCCACCAGAGGCCAG 1700 1501

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                                                                                  CAGGCTAGTGCACCGGACCATGGCCCAGCCACCCGTCCACGACTACGTGCCTGTTCTCTG
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GATGGCCCAGGCCCAGGAATGTGTGTTTGAGGCCTCTCACCACCTGCCTCCATGGCCCC
          CTTCCTGCAGCCCCCCACCTCCTCTAAGCCCCCAAGCCCTGTGCTTGCCGCAGGAGCTGGA
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99.1%; Pred. No. 0;
cive 0; Mismatches
| PRIOR APPLICATION NUMBER: US 09/540,217 |
| PRIOR FILING DATE: 2000-03-31 |
| PRIOR APPLICATION NUMBER: US 09/552,929 |
| PRIOR PILING DATE: 2000-04-18 |
| PRIOR PILING DATE: 2000-04-18 |
| PRIOR FILING DATE: 2000-05-18 |
| NUMBER OF SEQ ID NOS: 924 |
| SOFTWARE: Dt. Ft.genes Version 5.0 |
| SEQ ID NO 74 |
| LENGTH: 2738 |
| TYPE: DNA |
| REATURE: |
| RATURE: |
| NAME/KEY: CDS |
| LCCATION: (103)..(2109) |
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Matches 2116; Conservative
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Fatent No. US20020052308A1
GENERAL INFORMATION:
FATENT Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies
FILE REPERENCE: PA106
CURRENT APPLICATION NUMBER: US/09/925,301
CURRENT FILING DATE: 2001-08-10
FRIOR PELICATION NUMBER: ec/12600/05882
FRIOR PILING DATE: 2000-03-08
FRIOR PILING DATE: 1999-03-12
FRIOR PILING DATE: 1999-03-12
NUMBER OF SEQ ID NOS: 1694
SOFTWARE: Patentin Ver. 2.0
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; ORGANISM: Homo sapiens
US-09-925-301-174
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US-09-925-301-174
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                                                                                                                                                                                                                                                                                                                                                                                               APPLICANTENTIAL AND CONTRACT APPLICATION NUMBER: US/10/023,896
CURRENT FILING DATE: 2001-12-21
PRIOR APPLICATION NUMBER: PCT/US00/23794
PRIOR PILING DATE: 2001-12-21
PRIOR PILING DATE: 2000-08-30
PRIOR FILING DATE: 2000-08-30
PRIOR FILING DATE: 1999-09-03
PRIOR FILING DATE: 1999-09-03
PRIOR FILING DATE: 1999-10-06
PRIOR FILING DATE: 1999-10-06
PRIOR PILING DATE: 1999-10-06
SEQ ID NOS: 138
SOFTWARE: PATENTIN Ver. 2.0
SEQ ID NO 15
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US-10-023-896-15
US-10-023-896-15
, Sequence 15, Application US/10023896
; Publication No. US20030027776A1
; GENERAL INFORMATION:
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US-10-023-896-15
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RESULT 7
US-10-023-896-43
F. Sequence 43, Application US/10023896
F. Publication No. US20030027776A1
GENERAL INFORMATION:

2196 2136 1716 1776 1836 1896 1956 2016 2076 1596 1656 4 266 326 386 446 506 626 686 746 206 86 TCACAGTGGGCCAGTCCCCGGCCCTCCTCAACTGGAGCCCGAAGGCCCAGCAGGCAAG CTGTGCCGCGTCTCCGCGCGAGGTGGACTGCTTCGGGCTGTGATCTCCCAGACGCTGCAG GCCCCCGGACATCCAGCCTAAGACCCACAGAAGCCAGAGGCCAGGATGCCACGCTGTCC TGGAGACACGCGGAGGTGGTGACGGAGCTGAAGGCTGCGGGGAGAGGCGGCGGCCAGCCTG CGCTCACTGGCCAAGTATGCGGAGCTCGACCGTGAGGATGACTTCTGTGAGGCTGCCGAG cerroacraagranecegaecregaeceneagganearearrorereaggereceag AACCGGTGGCGGCTGGGCCCCGTCCACCTGACCCGAGGAGGGCGCGCTTTGGCCTC 327 AACCGGTGGCGGCTGGTGGGGCCCGTCCACCTGACCCGAGAGAGGGCGGCTTTGCCTC GCGGCTGGCCTGAAGGAGGGCGACTACATTGTGTCAGTGAATGGGCAGCCATGCAGGTGG CTGCTGGGCCCCCAGGGGCTTCTAAGGAGCCAGGAGGAGCATGGTTGCAAGACCCCGGCA GGCAAGGCACACCTGAAGCGTGCCATCCTGGGGCAGGAGGAGGCGCTGCGGCTGCACGCC Gaps Length 1013; 5 APPLICANT: Victor Roschke

TITLE OF INVENTION: 29 Human Cancer Associated Proteins
FILE REFERENCE: PA004P1
CURRENT APPLICATION NUMBER: US/10/023,896
CURRENT FILING DATE: 2001-12-21
FRICA APPLICATION NUMBER: PCT/US00/23794
FRICA FILING DATE: 2001-12-21
FRICA FILING DATE: 2000-08-30
FRICA FILING DATE: 2000-08-30
FRICA FILING DATE: 1999-09-03
FRICA FILING DATE: 1999-09-03
FRICA FILING DATE: 1999-10-06
NUMBER OF SEQ ID NOS: 138
SOFWARE: PatentIn Ver. 2.0
SEQ ID NO 43 Indels Query Match
38.7%; Score 955.4; DB 15;
Best Local Similarity 99.2%; Pred. No. 5.7e-222;
Matches 981; Conservative 0; Mismatches 6; TYPE: DNA ORGANISM: Homo sapiens 627 2137 687

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APPLICANT: Weng, Yonghong
APPLICANT: Weng, Yonghong
APPLICANT: Weng, Gezhi
APPLICANT: Weng, Gezhi
APPLICANT: Ren, Feiyan
APPLICANT: Kue, Aidong J.
APPLICANT: Weng, Jian-Rui
APPLICANT: Weng, Jian-Rui
APPLICANT: Weng, Jian-Rui
APPLICANT: Weng, Dunrui
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Chiwei
TILLE OF INVENTION: No. US20040048249Alel Nucleic Acids and
TILLE OF INVENTION: No. US20040048249Alel
TILLE OF INVENTION: Secreted Polypeptides
FILE REFERENCE: 805A
CURRENT FILING DATE: 2000-01-21
PRIOR FILING DATE: 2000-01-21
PRIOR FILING DATE: 2000-01-25
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Patent No. US20020132090A1

GENERAL INFORMATION:

APPLICANT: Robison, Keith E.

TITLE OF INVENTION: No. US20020132090A1e1 Nucleic Acid and Protein Homologs
FILE REFERENCE: 5800-119

CURRENT APPLICATION NUMBER: US/09/833,381

CURRENT FILING DATE: 2001-04-11

PRIOR APPLICATION NUMBER: 09/516,448

PRIOR FILING DATE: 2000-02-29
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 1293
LENGTH: 1155
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: LOCATION: (1)...(1155)

: OTHER INFORMATION: n = A,T,C or G

US-09-833-381-1293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
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US-09-833-381-1293
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Sequence 52, Application US/10239607

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Sequence 52, Application US/2030219761A1

Sequence 52, Application No. US20030219761A1

Sequence 52, Application No. US20030219761A1e1

TUTLE OF INVENTION: No. US20030219761A1e1 Prostate-Specific or TITLE OF INVENTION: Testia-Specific Nucleic Acid Molecules, Polypeptides, and TITLE OF INVENTION: Diagnostic and Therapeutic Methods

TITLE OF INVENTION: Diagnostic and Therapeutic Methods

FILE REFERENCE: 50218/003002

CURRENT FILING DATE: 2002-09-24

PRIOR APPLICATION NUMBER: PCT/US01/09410

PRIOR APPLICATION NUMBER: US 60/191,929

PRIOR FILING DATE: 2000-03-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: PASTSEQ for Windows Version 4.0
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                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA ORGANISM: Homo sapiens
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LENGTH: 2100
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Pred. No. 1.1e-153;
0; Mismatches 15;
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PRIOR FILING DAFE: 2000-02-28
PRIOR FILING DAFE: 2000-03-07
PRIOR FILING DAFE: 2000-03-07
PRIOR PILING DAFE: 2000-03-31
PRIOR FILING DATE: 2000-03-31
PRIOR FILING DATE: 2000-04-18
PRIOR FILING DATE: 2000-04-18
PRIOR FILING DATE: 2000-04-18
PRIOR FILING DATE: 2000-05-18
NUMBER OF SEQ ID NOS: 924
SOFTWARE: PLEAGENER VETSION 5.0
LENGTH: 1046
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; OTHER INFORMATION: n = a,t,c or g
US-10-112-944-558
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Best Local Similarity 97.9%;
Matches 683; Conservative
                                                                                                                                                                                                                                                                                                                       NAME/KEY: misc_feature
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Pred. No. 1.7e-110;
0; Mismatches 731;
                                          ; Sequence 51, Application US/10239607; Publication No. US20030219761A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 20.1%;
Best Local Similarity 56.8%;
Matches 977; Conservative
                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Homo sapiens
                          US-10-239-607-51
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                  CTCCCATGCGCCGAGCCCAGACATGAGCGCTGCGTCCCTCTGCGCACTGGAGCAGCTCAT
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** APPLICANT: Saatcioglu, Fahri
** APPLICANT: Saatcioglu, Fahri
** TITLE OF INVENTION: No. US20030219761Alel Prostate-Specific or
** TITLE OF INVENTION: Testie-Specific Nucleic Acid Molecules, Polypeptides, and
** TITLE OF INVENTION: Diagnostic and Therapeutic Methods
** TITLE OF INVENTION: Diagnostic and Therapeutic Methods
** TITLE OF INVENTION: Diagnostic and Therapeutic Methods
** TITLE OF INVENTION: Diagnostic and Therapeutic Methods
** TITLE OF INVENTION: Diagnostic and Therapeutic Methods
** CURRENT APPLICATION NUMBER: US/10/239, 607
** CURRENT APPLICATION NUMBER: PCT/US01/09410
** PRIOR FILING DATE: 2001-03-24
** PRIOR FILING DATE: 2001-03-24
** NUMBER OF SEQ ID NOS: 73
** SOFTWARE: FastSEQ for Windows Version 4.0
** SEQ ID NO 51
** LENGTH: 13526
** TITLE OF INVENTION TO THE TITLE OF THE TITL ä 380 128 440 129 GAATCAGCAGATCCTGAAAGCCGTGCGGATGAGGACGGAGGGGGAAAAGCTTCTGAAAGT 188 500 248 560 308 620 368 680 428 488 800 860 608 920 321 GGGCTGTGACTCCCTGACGCAGATCCAGTGCGGCCAGCTGCAGAGCCGCAGGCCCCAGAT 381 TCACCAGCAGATTGACAAGGAGCTGCAGATGCGGACGGGCGCTGAGAACCTCTACAGAGC CACCAGCAACAACGGGTGAGAGAGACGGTCGCCCTGGAGCTGAGCTACGTCAACTCCAA CCTGCAGATGCTCAAGGAAGAGCTGGAGGGCTGAACATCTCGGTGGGCGTCTATCAGAA GAATGAGTCGGGCCTGGAGCTGCTCACAGCCTATTACAACCAGCTGTGCTTCCTGGATGC GGATGAGGCCGGGGTGGAACTGCTGATGACATACTTCATCCAGCTGGGCTTTGTCGAGAGAG 609 resestrocestrasconscasanterecrecises and recreated and reconstructions of CGGIGCCCICCACACACAGAITGGGGCGCGCCAGGACCGCTCCTGCACCGAGGGTGCCCG GGGCTGTAATCCCCTTGCACAAACCGGCCGGAGTAAATTGCAGAATCAAAGAGCTGCTTT CCTGCAGCTGCTGAAGGAGGAGCTGGAGCTCAGCGGTGGTGGACCCTGGCCGGCA 561 IGGGAGCGAAGCTGTCACTGTCCCCATGATCCCCCTGGGCCTGAAGGAGACCAAGGAGCT GGACTGGTCTACACCGCTGAAGGAGCTGATCTCAGTGCACTTTGGAGAGGACGGCCTC 429 ATATGAAGATGAAATTGCAGATCTTATGGATCTGAGACAAGCTTGTCGGACGCCTAGCCG Gaps 369 cáacittgcagtccitcaagáartítraíctgaacattacagtgaagargctartt CTACGAGGCAGAAATCAGGGAGCTGGAGGCCCTGCGGCCAGGCCATGCGGACCCCCAGCCG GCGCTTCCTCACCCCTGCCAGGAGCCTCGGGCTCTTCTTCCACTGGTACGACTCGCTTAC 549 rdanticriccedecacacacacagarada crecierrica ceraciana actri TGGGGTCCCGGCCCAGCGTGCCCTGGCCTTCGAGAGGGCAGCGTTCTCTTCAACAT Length 3526; 12;

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TYPE: DNA
ORGANISM: Homo
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                              789 TACCCATACTCCAAGTTACGACATGAGCCCTGCCATGCTCAGCGTGCTCGTCAAAATGAT
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APPLICANT: Lepley, Denies M.
APPLICANT: Rieger, Denies M.
APPLICANT: Rieger, Daniel K.
APPLICANT: Burgess, Catherine E.
TITLE OF INVENTION: No. US20040043382Alel Proteins and Nucleic Acids Encoding Same
FILE REFERENCE: 14102-250C
CURRENT APPLICATION NUMBER: US/10/092,900A
CURRENT FILING DATE: 2002-02-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or PALM
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PRIOR APPLICATION NUMBER: USSN 60/274,322

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PRIOR FILING DATE: 2001-03-08

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PRIOR FILING DATE: 2001-03-08

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PRIOR FILING DATE: 2001-03-08

PRIOR APPLICATION NUMBER: USSN 60/274,191

PRIOR APPLICATION NUMBER: USSN 60/279,995

PRIOR APPLICATION NUMBER: USSN 60/279,995

PRIOR FILING DATE: 2001-05-31

PRIOR FILING DATE: 2001-05-31

PRIOR FILING DATE: 2001-05-31

PRIOR FILING DATE: 2001-04-30

PRIOR FILING DATE: 2001-04-30

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Pred. No. 3.8e-110;
; Sequence 351, Application US/10092900A; Publication No. US20040043382A1
                                                                                                                                     Spytek, Kimberly A.
Shenoy, Suresh G.
Taupier Jr., Raymond
Pena, Carol E.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patturajan, Meera
Gangolli, Esha A.
Vernet, Corine A.M.
Guo, Xiaojia Sasha
Tchernev, Velizar T
Fernandes, Elma R.
                                                             GENERAL INFORMATION:
APPLICANT: Padigaru, Muralidhara
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Anderson, David W.
                                                                                                                                                                                                                                                                Li, Li
Zerhusen, Bryan D.
Gusev, Vladimir Y.
Ji, Weizhen
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56.7%;
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Malyankar, Uriel M.
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Catterton, Elina
Leite, Mario W.
Zhong, Haihong
                                                                                                                                                                                                                                                                                                                                                                                               Gorman, Linda
Miller, Charles E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gerlach, Valerie
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Best Local Similarity
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1634 1392 1452

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1572 1874 1632 1934 1994

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GGCCAGGATGCCACGCCTGTCCCAGGGGAAGGGGCCTGACATCTTCCATCGGCTGGGGCC 1754
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                                    CTTCCTGCAGC----CCCCCCACCTCCTCTAAGCCCCCGAGGCCCTGTGC--TGCCGCAGGA
                                                                             1455 GCTGGAGGAGCGCAGCATGGCAAGGCACACCTGAAGCGTGCCATCCTGGGGCAGGA
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TITLE OF INVENTION: NO. US20040005560A1e1 full length
FILE REFERENCE: H1.-A0106
CURRENT APPLICATION NUMBER: US/10/108,260A
CURRENT FILING DATE: 2002-03-27
NUMBER OF SEQ ID NOS: 5458
SOFTWARE: Patentin Ver. 2.1
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Pred. No. 4.1e-110;
0; Mismatches 732;
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US-10-108-260A-2397
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ORGANISM: Homo
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                                                                                                                                                                    CCTGCAGATGCTCAAGGAAGAGCTGGAGGGTGAACATCTCGGTGGGCGTCTATCAGAA
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                                         321 GGGCTGTGACTCCCTGACGCAGATCCAGTGCGGCCAGCTGCAGAGCCGCAAGGCCCAGAT
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GENERAL INFORMATION:
APPLICANT: 51, Yonggang
TITLE OF INVENTION: HUMAN GTP-RHO BINDING PROTEIN 2
FILE REFERENCE: 5001-04-29
CURRENT PILING DATE: 2001-06-29
FRIOR APPLICATION NUMBER: US/09/695,0408
PRIOR APPLICATION NUMBER: PCT/US01/00666
PRIOR APPLICATION NUMBER: PCT/US01/00667
PRIOR APPLICATION NUMBER: PCT/US01/00667
PRIOR PILING DATE: 2001-01-30
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Patent No. US20020123474A1
GENERAL INFORMATION:
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TITLE OF INVENTION: HUMAN GTP-RHO BINDING PRO
FILE REFERENCE: AEOMICA-11
CURRENT APPLICATION HUMBER: US/09/895,040A
CURRENT PELING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: PCT/US01/00666
PRIOR FILING DATE: 2001-01-30
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US-09-895-040A-1
; Sequence 1, Application US/09895040A; Patent No. US20020123474A1
; GENERAL INFORMATION:
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Pred. No. 9.2e-110;
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Matches 975; Conservative
Homo sapiens
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US-09-895-040A-2
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Pred. No. 9.9e-110;
0; Mismatches 733;
PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION WUMBER: PCT/USO1/00663
PRIOR FILING DATE: 2001-01-30
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PRIOR FILING DATE: 2001-05-23
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SEQ ID NO 1
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Best Local Similarity 56.7%;
Matches 975; Conservative
                                                                                                                      TYPE: DNA
ORGANISM: Homo sapiens
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4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
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Sequence 13575, A Sequence 13466, A Sequence 11560, A Sequence 11676, A Sequence 5167, Appl Sequence 5434, Appl Sequence 15100, Appl Sequence 15100, A Sequence 1541, A Sequence 22, Appl Sequence 22, Appl Sequence 22, Appl Sequence 22, Appl Sequence 22, Appl Sequence 22, Appl Sequence 22, Appl Sequence 22, Appl Sequence 22, Appl Sequence 14123, A	NUCLEIC INASE PROTEINS, AND USES			ATGATCCTGGAGGAGG 120 	TATCTAGGAGAAACCC 180 	TIGAGAGACGIGIGGG 240 	316CACGTTGGCCCCATG 300
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GENERAL INFORMATION:
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TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: THEREOF
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TITLE OF INVENTION WIMBER: US/10/274,878
CURRENT FILING DATE: 2002-10-22
PRIOR APPLICATION NUMBER: 09/49,334
PRIOR APPLICATION NUMBER: 09/49,331
PRIOR APPLICATION NUMBER: 09/773,371
PRIOR FILING DATE: 2001-02-01
PRIOR FILING DATE: 2001-02-01
SEQ ID NOS: 4
SOFTWARE: FASESO for Windows Version 4.0
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                                                             TACATTGTGTCAGTGAATGGGCAGCCATGCAGGTGGTGGAGACACGCGGAGGTGGTGACG
                                                                      TCTAGACTGCCCAGCTTGGGGGACCGCCGGCCCGTCCTGCTGGGCCCCAGGGGGCTTCTA
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TITLE OF INVENTION: No. 6672186el Nucleic Acid and Protein Homologs
FILE REPREBUCE: 5800-119
CURRENT APPLICATION NUMBER: US/09/833,381
CURRENT FILING DATE: 2001-04-11
PRIOR APPLICATION NUMBER: 09/516,448
PRIOR PILING DATE: 2000-02-29
RIOR FILING DATE: 2000-02-29
SUNDRER OF SEQ ID NOS: 2050
SOFTWARE: FASTERQ for Mindows Version 3.0
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US-09-833-381-1293
; Sequence 1293, Application US/09833381
; Patent No. 6672186
; GENERAL INFORMATION:
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Pred. No. 1.4e-180;
0; Mismatches 7;
    Local Similarity 99.2%;
nes 962; Conservative
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; ORGANISM: Human
US-10-274-878-3
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ORGANISM: Human
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LENGTH: 2469
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Sequence 3, Application US/10274878

Patent No. 6670163

GENERAL INFORMATION:
TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES;
TITLE OF INVENTION: THERROF
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES;
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES;
CURRENT PERICATION NUMBER: US/10/274,878

PRIOR FILING DATE: 2001-02-07

PRIOR FILING DATE: 2001-05-07

NUMBER OF SEQ ID NOS: 4

SOFTWARE: FastSEQ for Windows Version 4.0
  Sequence 3, Application US/09849334
Patent No. 6500655
GENERAL INFORMATION:
GENERAL INFORMATION:
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Best Local Similarity 99.7%; Pred. No. 1.5e-64;
Matches 379; Conservative 0; Mismatches 0; Indels 1
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ORGANISM: Human
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LENGTH: 19025
TYPE: DNA
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APPLICANT: RUSCH, Douglas et al
APPLICANT: RUSCH, Douglas et al
APPLICANT: RUSCH, Douglas et al
APPLICANT: RUSCH, Douglas et al
APPLICANT: RUSCH, Douglas et al
APPLICANT: RUSCH, Douglas et al
APPLICANT: RUSCH, Douglas et al
ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES
TITLE OF INVENTION: THEREOF
TITLE OF INVENTION: THEREOF
TITLE OF INVENTION: THEREOF
CURRENT APPLICATION NUMBER: US/09/849,334
CURRENT APPLICATION NUMBER: 2001-05-07
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FASESEQ for Windows Version 4.0
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                                      Length 19025;
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2.8%; Score 68; DB 4; Length 246
al Similarity 51.3%; Pred. No. 8.8e-05;
158; Conservative 0; Mismatches 150; Indels
                   Score 368; DB 4; L. Pred. No. 1.5e-64; 0; Mismatches 0;
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; Sequence 1, Application US/09849334
; Patent No. 6500655
Query Match
Best Local Similarity 99.7%;
Matches 379; Conservative
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Sequence 1, Application US/10274878

Fatent No. 6670163

GENERAL INFORMATION:
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES
TITLE OF INVENTION: THEREOF
FILE REFERENCE: CLO01099-CIP-DIV
CURRENT APPLICATION NUMBER: US/10/274,878

FILE REPERENCE: 2002-10-22

FRIDE REPLICATION NUMBER: 09/49,334

PRIOR APPLICATION NUMBER: 09/773,371

PRIOR PILING DATE: 2001-05-07

PRIOR PILING DATE: 2001-05-07

WUMBER OF SEQ ID NOS: 4

SOFTWARE: FastSEQ for Windows Version 4.0
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1573 CCCGAAGCAGGTCCACCTCGCGCAGACGCGCACAGGGCGTGCAGCGCCGCAGCGCTCCT 1514
                                                                     1686 GAAGCCAGAGGCCAGGATGCCACGCCTGTCCCAGGGGAAGGGGCCTGACATCTTCCATCG 1745
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51.3%; Pred. No. 8.8e-05;
ive 0; Mismatches 150; Indels
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Best Local Similarity 51.3;
Matches 158; Conservative
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; ORGANISM: Human
US-10-274-878-1
                                                                                                                                                                                                                                                                                  .10-274-878-1/c
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Sequence 1, Application US/09922445
Patent No. 6528268
GENERAL INFORMATION:
APPLICANT: Andersson, Maria K.
APPLICANT: Berglund, Lars G. T.
APPLICANT: Reneland, Rikard H.

US-09-922-445-1

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NAMENTENT MISC Feature
NAMENTON: (24801)...(24801)
OTHER INFORMATION: nuclectide 24801 is a single nuclectide polymorphism which can be
OTHER INFORMATION: A or G
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LOCATION: (24941). (24941).
OFFER INFORMATION: nuclectide 24941 is a single nucleotide polymorphism which can be
OTHER INFORMATION: T or C
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LOCATION: (17645)..(27645)
OTHER INFORMATION: uncleotide 27645 is a single nucleotide polymorphism which can b
OTHER INFORMATION: C or G
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OTHER INFORMATION:
NAME/KEY: misc feature
LOCATION: (32153)..(32153)..(32153)..

OTHER INFORMATION: nuclectide 32163 is a single nuclectide polymorphism which can b
OTHER INFORMATION: A or C
APPLICANT: Adam, Gail I. R.
TITLE OF INVENTION: REAGENTS AND METHODS FOR DETECTION OF HEART FAILURE
FILE REFERENCE: GG126US
CURRENT APPLICATION NUMBER: US/09/922,445
CURRENT FILING DATE: 2010-08-03
NUMBER OF SEQ ID NOS: 51
SOFTWARE: Patentin version 3.1
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OTHER INFORMATION:
NAME/KEY: Intron
LOCATION: (32529).. (33414)
OTHER INFORMATION:
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OTHER INFORMATION:
NAME/KEY: Intron
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LOCATION: (26253)..(26401)
OTHER INFORMATION:
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LOCATION: (26544)..(27024)
OTHER INFORMATION:
NAME/KEY: exon
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LOCATION: (27179)..(30519)
OTHER INFORMATION:
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LOCATION: (30682)..(30894)
OTHER INFORMATION:
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LOCATION: (31028)..(31747)
OTHER INFORMATION:
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OTHER INFORMATION:
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OTHER INFORMATION:
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OTHER INFORMATION:
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                                                                                                                                                                                                    LENGTH: 38653
                                                                                                                                                                           SEQ ID NO 1
                                                                                                                                                                                                                          TYPE: DNA
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2.3%; Score 57.2; DB 1; Length 2
Best Local Similarity 44.8%; Pred. No. 0.023;
Matches 267; Conservative 0; Mismatches 323; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/258,261B

FILING DATE: 08-JUN-1994

CLASSITCATION BOO

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/457,205

FILING DATE: 01-JUN-1995

ATTORNEY/AGENT INFORMATION:

NAME: Elmer, James Scott

REGISTRATION NUMBER: GC 1506/CIP3

TELEPHONE: 919-541-8614

TELEPHONE: 919-541-8614

SECURATION FOR SEQ ID NO: 6: SEQUENCE CHARACTERISTICS:

SEQUENCE CHARACTERISTICS:

SEQUENCE CHARACTERISTICS:

TENERPHONE: 919-541-8619
                         CORRESPONDENCE ADDRESS:
ADDRESSEE: Ciba-Geigy Corporation
STREET: 7 Skyline Drive
CITY: Hawthorne
                                                                                                                                                                                                                                                                 STATE: NY
COUNTRY: USA
ZIP: 10532
COMPUTER READABLE FORM:
MEDUM TYPE: Floppy disk
COMPUTER: IBM PC COMPUTER:
OPERATING SYSTEM: PC-DOS/MS-DX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: DNA (genomic) HYPOTHETICAL: NO
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TYPE: nucleic acid
STRANDEDNESS: single
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NAME/KEY: misc_feature
LOCATION: (32614).
OTHER INFORMATION: uucleotide 32614 is a single nucleotide polymorphism which can be
OTHER INFORMATION: A or G
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Patent No. 5639949
GENERAL INPORMATION:
APPLICANT: Schupp, Thomas
APPLICANT: Ligon, James M.
APPLICANT: Hill, Dwight Steven
APPLICANT: Hill, Dwight Steven
APPLICANT: Gaffney, Thomas Deane
APPLICANT: Lam, Stephen Ting
APPLICANT: Lam, Stephen Ting
APPLICANT: Lam, Stephen Ting
APPLICANT: Uknes, Scott Joseph
TITLE OF INVENTION: Genes for the synthesis of
TITLE OF INVENTION: antipathogenic substances
NUMBER OF SEQUENCES: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26271 recenedecececercic 26302
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DATABASE ACCESSION NUMBER: Genbank/AC004923
DATABASE ENTRY DATE: 1999-12-21
RELEVANT RESIDUES: (1)..(38653)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: Intron
LOCATION: (34589)..(36404)
OTHER INFORMATION:
NAME/KEY: exon
LOCATION: (36405)..(36523)
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: Intron
LOCATION: (36524)..(38341)
OTHER INFORMATION:
NAME/KEY: exon
                                                                                                                                                                                                                                  NAME/KEY: exon
LOCATION: (33415)..(33597)
OTHER INFORMATION:
NAME/KEY: Intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION: (33598)..(34314)
OTHER INFORMATION:
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LOCATION: (34315)..(34588)
OTHER INFORMATION:
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OTHER INFORMATION:
PUBLICATION INFORMATION:
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1133 GCCTCTCACCACCTGCCTCCATGGCCCCCCAAGACTGCCTGGCCCAGCTGCGCCTGGCGC 1192
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APPLICANT: Galffney, Thomas Deane
APPLICANT: Galffney, Thomas Deane
APPLICANT: Hammer, Phillip E.
APPLICANT: Wras, Scott Joseph
APPLICANT: Wras, Scott Joseph
TITLE OF INVENTION: Genes for the synthesis of
TITLE OF INVENTION: antipathogenic substances
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APPLICATION NUMBER: US 08/457,205
FILING DATE: 01-JUN-1995
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7 Skyline Drive
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APPLICATION NUMBER: US/08/457,342
FILING DATE: 01-UUN-1995
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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Patent No. 5662898
GENERAL INFORMATION:
APPLICANT: Schupp, Thomas
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Beck, James Joseph
Hill, Dwight Steven
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ADDRESSEE: Ciba-Geig
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OPERATING SYSTEM:
SOFTWARE: Patent1
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CLASSIFICATION:
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APPLICANT:
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US-08-457-342-6
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                                                                                           22271 TÓGCCÓRGCÁCCTGCGCCAGÓCTTGCGCCGAGACCGCGCCTCGCCTCGCGCGTGCTCTCGC 22330
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CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/456,837
FILING DATE: 01-JUN-1995
CLASSITCATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/457,205
FILING DATE: 08-JUN-1995
APPLICATION NUMBER: 08/258,261
FILING DATE: 08-JUN-1995
ATTORNEY/AGENT INFORMATION:
NAME: Elmer, James Scott
REGISTRATION NUMBER: 36,129
REFERENCE/DOCKET NUMBER: GC 1506/CIP3
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-541-8614
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Pred. No. 0.023;
0; Mismatches 323;
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APPLICANT: Law, Stephen Ting
APPLICANT: Hammer, Phillip E.
APPLICANT: Wknes, Scott Joseph
TITLE OF INVENTION: Genes for the synthesis of
TITLE OF INVENTION: antipathogenic substances
NUMBER OF SEQUENCES: 22
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Patent No. 5643774
GENERAL INFORMATION:
APPLICANT: Schupp, Thomas
APPLICANT: Ligon, James M.
APPLICANT: Hill, Dwight Steven
APPLICANT: Hill, Dwight Steven
APPLICANT: Ryals, John Andrew
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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INFORMATION FOR SEQ ID NO: 6: SEQUENCE CHARACTERISTICS:
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nucleic acid
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MEDIUM TYPE: Floppy
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CITY: Hawthorne
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HYPOTHETICAL:
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US-08-456-837-6
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COMPUTER: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION WHERE: US/08/457,646A
FILING DATE: 01-JUN-1995
CLASSIFICATION: 530
PRIOR APPLICATION:
                                                              APPLICANT: Ryals, John Andrew
APPLICANT: Gaffney, Thomas Deane
APPLICANT: Lam, Stephen Ting
APPLICANT: Harmer, Phillip E.
APPLICANT: Wrnes, Scott Joseph
TITLE OF INVENTION: Genes for the synthesis of
TITLE OF INVENTION: antipathogenic substances
NUMBER OF SEQUENCES: 22
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ER: CGC 1506/CIP3
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/457,205
FILING DATE: 01-UNN-1995
APPLICATION NUMBER: 08/258,261
FILING DATE: 08-Unn-1994
ATTORNEY/AGENT INFORMATION:
NAME: Blmer, James Scott
REGISTRATION NUMBER: 36,129
REGISTRATION NUMBER: 36,129
REGISTRATION NUMBER: 36,129
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-541-8619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: Ciba-Geigy Corporation
STREET: 7 Skyline Drive
CITY: Hawthorne
                            Hill, Dwight Steven
Ryals, John Andrew
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ANTI-SERVE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
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Pred. No. 0.023;
0; Mismatches 323; Indels 6;
                                                                                                                                                                                  36,129
BER: CGC 1506/CIP3
         08/258,261
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Patent No. 5679560
GENERAL INFORMATION:
APPLICANT: Schupp, Thomas
APPLICANT: Ligon, James M.
APPLICANT: Beck, James Joseph
                                                                                                                                  NAME: Elmer, James Scott
REGISTRATION UNDBER: 36,129
REFERENCE/DOCKET UNDBER: GC
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-541-8614
TELEPHONE: 919-541-8649
INFORMATION FOR SEQ ID NO: 6: SEQUENCE CHARACTERISTICS:
LENGTH: 28958 base pairs
TYPE: nucleic acid
STRANDEDMESS: single
TOPOLOGY: linear
NOLECULE TYPE: NOA (Genomic)
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Best Local Similarity 44.8%;
Matches 267; Conservative
                                                FILING DATE: 08-Jun-1994
ATTORNEY/AGENT INFORMATION:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ANTI-SENSE: NO
US-08-457-342-6
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2.3%; Score 57.2; DB 1; Length 28958; llarity 44.8%; Pred. No. 0.023; Conservative 0; Mismatches 323; Indels 6;
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Schupp, Thomas Ligon, James M. Beck, James Joseph

Gaps

22036

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22271 TĊĠccĠAĠCĀĊĊŦĠĊGCĊĀĠĠĊŤŦGCGĊĠAGACCĠĊĠĊĊĠĊCŦĊĠĊĠGGĠŦĠCŦĊŦĊĠĊ
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                                                                                                           Length 28958;
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APPLICANT: Ligon, James M.
APPLICANT: Schupp, Thomas
APPLICANT: Holl, Dwight S.
APPLICANT: Hill, Dwight S.
APPLICANT: Ryals, John A.
ITILE OF INVENTION: Genes For The Biosynthesis Of Soraphen NUMBER OF SEQUENCES: 10
                                                                                                                                                                                                 0; Mismatches 323; Indels
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                Score 57.2; DB 1;
Pred. No. 0.023;
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520 White Plains Road, P.O. Box 2005
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                                                                                                                         2.3%;
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ADDRESSEE: Ciba-Geig
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Best Local Similarity
Matches 267; Conserv
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US-08-764-233A-4
ANTI-SENSE:
        ; ANTI-SENSE:
US-08-458-076A-6
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CURRENT APPLICATION DATA:

APPLICATION NUMBER:

FILING DATE:

APPLICATION NUMBER:

CLASSIFICATION:

APPLICATION NUMBER:

RIGHT APPLICATION NUMBER:

APPLICATION NUMBER:

APPLICATION NUMBER:

APPLICATION NUMBER:

APPLICATION NUMBER:

APPLICATION NUMBER:

ATTORNEY/AGENT INFORMATION:
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APPLICANT: Ligon, James Moseph
APPLICANT: Hill, Dwight Steven
APPLICANT: Hill, Dwight Steven
APPLICANT: Hyals, John Andrew
APPLICANT: Gaffney, Thomas Deane
APPLICANT: Hammer, Phillip E.
APPLICANT: Hammer, Phillip E.
APPLICANT: Homes, Scott Joseph
TITLE OF INVENTION: Genes for the synthesis of
TITLE OF INVENTION: antipathogenic substances
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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TELEPHONE: 919-541-8614
TELEFAX: 919-541-8689
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nucleic acid
EDNESS: single
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REGISTRATION NUMBER: 36,
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CITY: Hawthorne
STATE: NY
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APPLICANT: Schupp
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MOLECULE TYPE: I
HYPOTHETICAL: NO
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21797 caacaarccracccccaaaaaccaaracccracccaccraccracccrrccaaccaaac 21856
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2.3%; Score 57.2; DB 1; Length 2
Best Local Similarity 44.8%; Pred. No. 0.023;
Matches 267; Conservative 0; Mismatches 323; Indels
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/457,335A
FILING DATE: 01-JUN-1995
CLASSIFICATION: 800
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APPLICANT: Harmer, Phillip E.
APPLICANT: Harmer, Phillip E.
TITLE OF INVENTION: Genes for the synthesis of
TITLE OF INVENTION: antipathogenic substances
CORRESPONDENCE ADDRESS:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/457,205
FILING DATE: 01-JUN-1995
APPLICATION UNMBER: 08/258,261
FILING DATE: 08-JUN-1994
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                              Schupp, Thomas
Ligon, James M.
Beck, James Joseph
Hill, Dwight Steven
Ryals, John Andrew
Gaffney, Thomas Deane
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OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                 Sequence 6, Application US/08457335A Patent No. 5723759
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REGISTRATION NUMBER: 36,129
REFERENCE/DOCKET NUMBER: CG
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-541-8614
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TYPE: nucleic acid
STRANDEDNESS: single
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919-541-8689
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US-08-457-335A-6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2.3%; Score 57.2; DB 1; Length 28
44.8%; Pred. No. 0.023;
Live 0; Mismatches 323; Indels
                                                                                                                       CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/729,214
FILLING DATE: 09-CCT-1996
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
ATTORNEY/AGENT INFORMATION:
NAME: Maigs, J. Timochy
REGISTRATION NUMBER: 18,241
REFERENCE/DOCKET NUMBER: 18,06/CIP6
TELECOMMUNICATION INFORMATION:
TELEPRAX: (919) 541-8689
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 28958 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
TYPE: nucleic acid
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/764,233A
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IMMEDIATE SOURCE:
CLONE: p98/1
-764-070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear MOLECULE TYPE: DNA (genomic) ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 267; Conservative
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Gaps

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                        1373 AGGGAGGACTCCCCACGACGAGGAGTCTTCCTGCAGCCCCCCCACCTCTTAAGCCCC 1432
                                                                                                                                                                                                1433 GAGGCCCTGTGCCGCCAGGAGCTGGAGGAGCGCAGGCATGGCAAGGCACACTGA 1492
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                                                                1313 rececrecereceneracenceres confedences and recent recent confedence 1372
1253 ccgrcchcgacraccraccracracracraccraccraccraccararcaageccaagracr 1312
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22331 TCCTCGCCCTCGACGAAAGTCCCCTCGCCGACCATGCCGCGCGGGGACTC 22386
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Search completed: July 13, 2004, 08:26:32 Job time: 129.439 secs

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528.143 Million cell updates/sec
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3774
1 MILBERPDGAGAGEESPRLQ.....QPCAFVKPAPPSSLKHPGWP 723
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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                       OM protein - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 2000000000
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Perfect score:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	Sequence 2. Appli	Sequence 2, Appli	'n	318		4	7	Sequence 2465. An	Sequence 1016. Ap	Seguence 59. Aprol		Segmence 4840. An	Seminary 352	Segmence 53, Appl	Sequence 3, Appli
SUMMARIES	ID	US-10-697-266-2	US-10-274-878-2	US-10-451-207-2	US-10-112-944-318	US-10-697-266-4	US-10-274-878-4	US-10-239-607-71	US-10-408-765A-2465	US-09-925-301-1016	US-10-023-896-59	US-10-023-896-87	US-10-108-260A-4840	US-10-092-900A-352	US-10-239-607-53	US-09-895-040A-3
	DB	12	14	12	12	12	14	15	16	σ	14	14	15	12	15	o.
	Query Match Length DB	723	723	670	699	634	634	643	311	257	257	257	686	611	989	989
% o	Query Match	100.0	100.0	91.4	91.0	61.8	61.8			33.9						
	Score	3774	3774	3449.5	3435	2331	2331	2331	1442.5	1278	1278	1278	1256	1255	1255	1249
	Result No.	1	7	m (₹ 7	1	9	7	80	σ	10	11	12	13	14	15

Sequence 73, Appl	2644		72	77		29	Sequence 54518. A		Sequence 1. Appli	Sequence 59396. A	Sequence 180574.	Sequence 251, App	Sequence 251, App	Sequence 199, App	Sequence 3015. Ap	Sequence 106, App	Sequence 2179. An	Sequence 275853,	Sequence 123181.	Sequence 166, App	Sequence 187, App	Sequence 144, App	Sequence 74, Appl	Sequence 235, App	Sequence 236, App	Sequence 7865, Ap	Sequence 8, Appli	6	Sequence 86, Appl
15 US-10-239-607-73	16 US-10-408-765A-2644		15 US-10-239-607-72	12 US-10-112-944-776	15 US-10-378-029-101	15 US-10-108-260A-2912	12 US-10-425-114-54518	15 US-10-094-749-1895	16 US-10-433-794-1	12 US-10-425-114-59396	16 US-10-437-963-180574	12 US-10-221-278-251	15 US-10-291-172-251	9 US-09-800-729-199	15 US-10-264-049-3015	9 US-09-800-729-106		12 US-10-424-599-275853	16 US-10-437-963-123181	9 US-09-801-368-166	15 US-10-630-590-187	9 US-09-771-161A-144	14 US-10-354-358-74	9 US-09-771-161A-235	9 US-09-771-161A-236		14 US-10-134-102-8	US-10-144	12 US-10-042-865-86
989	989	989	718	180	391	298	1403	939	1636	877	883	898	898	921	921	898	868	200	397	199	104	780	942	942	942	1151	1522	1522	77
32.9	32.5	31.7	27.1	24.8	22.5	10.4	10.3	10.1	10.1	8.0	7.8	7.3	7.3	7.1	7.1	7.0	7.0	6.7	6.7	6.1	6.4	4.1	4.1	4.1		o. ه	3.9	3.9	3.8
1242	1228	1195	1023	936	849	394	387	380.5	380.5	301	294.5	274.5	274.5	268	268	264.5	264.5	251.5	251.5	232	185	156.5	156.5	155.5	155.5	146	145.5	145.5	144.5
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	32	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

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APPLICANT: RUSCH, Douglas et al
TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES
TITLE OF INVENTION: THEREOF
TITLE OF INVENTION: THEREOF
FILE REFERENCE: CL001099-CIP-DIV2
CURRENT APPLICATION NUMBER: US/10/697,266
CURRENT APPLICATION NUMBER: 10/274,878
PRIOR APPLICATION NUMBER: 09/849,334
PRIOR FILING DATE: 2001-10-22
PRIOR PLING DATE: 2001-05-07
PRIOR PLING DATE: 2001-05-07
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 3774; 100.0%; Pred. No. 0; tive 0; Mismatches
                                              Sequence 2, Application US/10697266
Publication No. US20040067522A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.0
Matches 723; Conservative
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US-10-697-266-2
US-10-697-266-2
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SLGLFFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQ
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                                                    VHVGPMNPQLHAVGCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVR
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| Sequence 2, Application US/10451207
| GENERAL INFORMATION:
| APPLICANT: INCYTE GENOMICS, INC.
| APPLICANT: BURFORD, Neil
| APPLICANT: DING, Li
| APPLICANT: THORNTON, Michael B. APPLICANT: THORNTON, Michael B. APPLICANT: THORNTON, Michael B. APPLICANT: APPLICANT: APPLICANT: APPLICANT: BAUGHN, Mariah R. APPLICANT: BAUGHN, Mariah R. APPLICANT: DUGGAN, Brendan M. APPLICANT: LU, DYUNG Aina M.
| APPLICANT: THANGANEU, Kavitha APPLICANT: THANGANEU, Kavitha APPLICANT: TANG, Y. TOM
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US-10-451-207-2
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CONTRACTOR AND DOUGHAS et al
TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES;
TITLE OF INVENTION: THEREOF
FILE REFERENCE: CL001099-CIP-DIV
CURRENT APPLICATION NUMBER: US/10/274,878
CURRENT APPLICATION NUMBER: 09/489,334
PRIOR APPLICATION NUMBER: 09/73,371
PRIOR APPLICATION NUMBER: 09/73,371
PRIOR APPLICATION NUMBER: 09/73,371
PRIOR FILING DATE: 2001-02-01
NUMBER OF SEQ ID NOS: 4
SOFTWARE: PSELSEQ for Windows Version 4.0
SEQ ID NO 2
LENGTH: 723
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     ETVALELSYVNSNLOLLKEELEELSGGVDPGRHGSEAVTVPMIPLGLKETKELDWSTPLK
                  SLGLFFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQ
                                                                                                                      GLKEGDYIVSVNGQPCRWWRHAEVVTELKAAGEAGASLQVVSLLPSSRLPSLGDRRPVLL
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                                                                     RAAGAFSILRENFSHAPSPDMSAASLCALEQLMMAQAQECVFEGLSPPASMAPQDCLAQL
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100.0%; Score 3774;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 723; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2, Application US/10274878 Publication No. US20030049792A1 GENERAL INFORMATION:
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ORGANISM: Human
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US-10-274-878-2
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61 VHVGPMNPQLHAVGCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVR 120
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      608 GPRGLLRSQREHGCKTPASTWASPRPLLNWSRKAQQGKTGGCPQPCAPVKPAPPSSLKHP
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APPLICANT: Ghosh, Malabika
APPLICANT: Ghosh, Malabika
APPLICANT: Ghosh, Dunrui
APPLICANT: Ang, Dunrui
APPLICANT: Ang, Dunrui
APPLICANT: Construction A.
APPLICANT: Construction A.
ITLE OF INVENTION: Secreted Polypeptides
FILE REFERENCE: 805A
CURRENT APPLICATION NUMBER: US/10/112,944
CURRENT FILING DATE: 2002-03-28
FRIOR APPLICATION NUMBER: US 09/489,725
PRIOR APPLICATION NUMBER: US 09/496,914
PRIOR PILING DATE: 2000-01-25
PRIOR PELING DATE: 2000-02-03
PRIOR PELING DATE: 2000-02-03
PRIOR FILING DATE: 2000-02-38
PRIOR FILING DATE: 2000-03-31
PRIOR APPLICATION NUMBER: US 09/519,705
PRIOR FILING DATE: 2000-03-31
PRIOR PILING DATE: 2000-03-31
PRIOR PILING DATE: 2000-03-31
PRIOR PILING DATE: 2000-03-31
PRIOR FILING DATE: 2000-04-18
PRIOR FILING DATE: 2000-04-18
PRIOR FILING DATE: 2000-04-18
PRIOR FILING DATE: 2000-04-18
PRIOR FILING DATE: 2000-05-18
PRIOR FILING DATE: 2000-05-18
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Pred. No. 3.6e-292;
0; Mismatches 0;
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. Sequence 318 Application US/10112944
. Publication No. US20040048249A1
. GENERAL INFORMATION:
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SOFTWARE: pt_FL_genes Version 5.0
SEQ ID NO 318
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ilarity 92.5%;
Conservative
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Wehrman, Tom
Ghosh, Malabika
                                                                                                                                                                                                                                                                     APPLICANT: Tang, Y. Tom
APPLICANT: Yang, Yonghong
APPLICANT: Weng, Gezhi
APPLICANT: Zhang, Jie
APPLICANT: Ren, Feiyan
APPLICANT: Xue, Aidong J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; ORGANISM: Homo sapiens
US-10-112-944-318
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APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 3449.5; DB 12; Length 670;
Pred. No. 1.9e-293;
0; Mismatches 0; Indels 53;
                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc feature
CTHER INFORMATION: Incyte ID No. US20040038267A1 5560161CD1
US-10-451-207-2
APPLICANT: KHAN, Farrah A.
APPLICANT: YAO, Monique G.
APPLICANT: EMERLING, Brooke M.
TITLE OF INVENTION: INTRACELLUAR SIGNALING MOLECULES
FILE REFERENCE: PF-0868 USN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MILEERPDGAGAGEESPRIQ-------
                                                                                              CURRENT APPLICATION NUMBER: US/10/451,207
CURRENT FILING DATE: 2003-66-18
PRIOR APPLICATION NUMBER: PCT/US01/50315
PRIOR FILING DATE: 2001-12-19
PRIOR PLING DATE: 2000-12-21
PRIOR APPLICATION NUMBER: US 60/257,804
PRIOR APPLICATION NUMBER: US 60/260,102
PRIOR FILING DATE: 2001-01-05
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PERL PROGRAM
; SOFTWARE: PERL PROGRAM
; SEQ ID NO 5: LENGTH: 670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 92.7%;
Matches 670; Conservative
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ORGANISM: Homo sapiens
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Fequence 4, Application US/10274878

PUDLICATION NO. US20030049792A1

GRNERAL INFORMATION:
APPLICAMT: RUSCH, Douglas et al

TITLE OF INVENTION: ACID MOLECULES ENCODING

TITLE OF INVENTION: ACID MOLECULES ENCODING

TITLE OF INVENTION: THEREOF

FILE REFERENCE: CL001099-CIP-DIV

CURRENT APPLICATION NUMBER: US/10/274,878

CURRENT FILING DATE: 2002-10-22

PRIOR APPLICATION NUMBER: 09/849,334

PRIOR PLING DATE: 2001-05-07

PRIOR APPLICATION NUMBER: 09/773,371

PRIOR FILING DATE: 2001-05-07

FRIOR FILING DATE: 2001-05-07

NUMBER OF SEQ ID NOS: 4

SEQ ID NO 4.0

SEQ ID NO 4.0
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Matches 473;
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Publication No. US20040067522A1

GENERAL INPORMATION:

GENERAL INPORMATION:

TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC

TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS,

TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS,

TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS,

TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS,

TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS,

TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS,

FILE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS,

PRIOR PELLING DATE: 2003-10-31

PRIOR FILING DATE: 2003-10-23

PRIOR FILING DATE: 2001-05-07

PRIOR FILING DATE: 2001-05-07

PRIOR FILING DATE: 2001-05-07

NUMBER OF SEQ ID NOS: 4

SEQ ID NO 4

LEASTH 634

LEASTH 634
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                                         SLGEFFWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQ
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                                                                                     RAAGAFSLIRENFSHAPSPDMSAASLCALEQLAMAQAQECVFEGLSPPASMAPQDCLAQL
                                                                                                        RLAQEAAQVAAEYRLVHRTMAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDGS
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US-10-697-266-4
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LECULES ENCODING HUMAN KINASE PROTEINS, AND USES
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Matches 473; Conserv
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Publication No. US20030219761A1

GENERAL INFORMATION:

APPLICATION No. US20030219761A1

GENERAL INFORMATION:

TITLE OF INVENTION: No. US20030219761A1e1 Prostate-Specific or

TITLE OF INVENTION: Testis-Specific Nucleic Acid Molecules, Polypeptides, and

TITLE OF INVENTION:

TITLE OF INVENTION:

TITLE OF INVENTION:

CURRENT APPLICATION NUMBER: US/10/239,607

CURRENT APPLICATION NUMBER: PCT/US01/09410

PRIOR PLING DATE: 2000-03-23

PRIOR PLING DATE: 2000-03-24

NUMBER OF SEQ ID NOS: 73

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 71

LENGTH: 643
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61.8%; Score 2331;
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APPLICANT: Ghosh, Soumitra S.
APPLICANT: Zhang, Bang
APPLICANT: Zhang, Bang
APPLICANT: Taylor, Steven W.
APPLICANT: Taylor, Steven W.
APPLICANT: Glenn, Gary M.
APPLICANT: Glenn, Gary M.
TITLE OF INVENTION: IDENTIFIED IN THE MITOCHONDRIAL PROTEOME
FILE REPRENCE: 660088.465
FILE REPRENCE: 660088.465
CURRENT APPLICATION NUMBER: US/10/408,765A
CURRENT FILING DATE: 2003-04-04
NUMBER OF SEQ ID NOS: 3077
SEQ ID NO 2465
LENGTH: 311
                     72;
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                     Indels
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Pred. No. 2.8e-195;
9; Mismatches 112;
                                                                                                   1 MILEERPDGQGTGEESSRPQDD-----GSIR-
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188 QVVSLLPSSRLPSLGDRRPVLLGPRGLLRSQREHGCKTPASTWASPRALLNWSRKAQQGK 247
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Publication No. US20030027776A1
GENERAL INFORMATION:
GENERAL INFORMATION:
TILE COF INVENTION: 29 Human Cancer Associated Proteins
FILE REFRENCE: PA004P1
CURRENT APPLICATION NUMBER: US/10/023,896
CURRENT FILING DATE: 2001-12-21
PRIOR FILING DATE: 2001-12-21
PRIOR FILING DATE: 2001-12-21
PRIOR FILING DATE: 2001-12-21
PRIOR FILING DATE: 2001-12-21
PRIOR FILING DATE: 2001-08-30
PRIOR PELICATION NUMBER: 60/152,296
                                                                                                                                                                                                                                            APPLICANT: Victor Roschke
TITLE OF INVENTION: 29 Human Cancer Associated Proteins
FILE REFERENCE: PA004P1
CURRENT PRILING DATE: 2001-12-21
PRIOR APPLICATION NUMBER: US/10/023,896
PRIOR PILING DATE: 2001-12-21
PRIOR APPLICATION NUMBER: PCT/US00/23794
PRIOR APPLICATION NUMBER: PCT/US00/23794
PRIOR FILING DATE: 2000-08-30
PRIOR FILING DATE: 2000-08-30
PRIOR FILING DATE: 1999-09-03
PRIOR FILING DATE: 1999-10-06
NUMBER OF SEQ ID NOS: 138
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Pred. No. 1.9e-103;
0; Mismatches 2;
                                                                                                                                                                                  ; Sequence 59, Application US/10023896; Publication No. US20030027776A1; GENERAL INFORMATION:
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SEQ ID NO 59
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Best Local Similarity 99.2
Matches 245; Conservative
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US-10-023-896-59
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                                                                                     DB 16; Length 311;
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APPLICANT: Rosen et al.

TITLE OF INVENTION:

FILE REPRENCE: PA106

CURRENT APPLICATION NUCHEIC ACIds, Proteins and Antibodies;
FILE REPRENCE: PA106

CURRENT APPLICATION NUCHER: US/09/925,301

CURRENT PILING DATE: 2001-08-10

PRIOR APPLICATION NUMBER: PCT/US00/05882

PRIOR FILING DATE: 1909-03-08

PRIOR FILING DATE: 1999-03-12

NUMBER OF SEQ ID NOS: 1694

SOFTWARE: PATENTIN OFFICE: 1999-03-12

NUMBER OF SEQ ID NOS: 1694

SEQ ID NOS: 1694

LENGTH: 257
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                                                                                  Score 1442.5; DB 16
Pred. No. 9.3e-118;
0; Mismatches 1;
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99.2%; Pred. No. 1.9e-103;
tive 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1016, Application US/09925301
Patent No. US20020052308A1
                                                                              38.2%;
Best Local Similarity 91.6%;
Matches 282; Conservative (
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Best Local Similarity 99.2'
Matches 245; Conservative
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CRGANISM: Homo sapiens
US-09-925-301-1016
                       ORGANISM: Homo sapiens
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                           ) ORGANISH: ALCHO .
US-10-408-765A-2465
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US-09-925-301-1016
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                                                                                                                                                                                                                                                519 APDIQPKTHQKPEARMPRLSQGKGPDIFHRLGPLSVFSAKNRWRLVGPVHLTRGEGGFGL
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Publication No. US2004005550A1
GENERAL INFORMATION:
APPLICANT: HELIX RESEARCH INSTITUTE
APPLICANT: HELIX RESEARCH INSTITUTE
TITLE OF INVENTION: No. US20040005560A1e1 full length cDNA
FILE REFERENCE: HI-AA0106
CURRENT APPLICATION NUMBER: US/10/108,260A
NUMBER OF SEQ ID NOS: 5458
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 4840
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PRIOR FILING DATE: 1999-09-03
PRIOR APPLICATION WUMBER: 60/158,003
PRIOR FILING DATE: 1999-10-06
NUMBER OF SEQ ID NOS: 138
SOFTWARE: PATENTIN Ver. 2.0
SEQ ID NO 87
                                                                                                       TYPE: PRT
ORGANISM: Homo sapiens
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ORGANISM: Homo sapiens
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APPLICANT: Burgess, Catherine E. TITLE OF INVENTION: No. US20040043382A1el Proteins and Nucleic Acids Encoding Same FILE REFERENCE: 21402-290C
                                                                                                                         322 QQLEAAMSQAPVKENIPYSWASLACVKAHHYAALAHYFTAILLIDHQVKPGTDLD---HQ 378
                                                                                                                                                                                       432 QVFLQPPTSSKPRG--PVLP-QELBERRQLGKAHLKRAILGQEEALRLHALCRVLREVDL 488
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                                                                                                                                                                                                                                                                                                                     314 SHAPSPDMSAASLCALEQLMMAQAQECVFEGLSPPASMAPQDCLAQLRLAQEAAQVAAEY
                                                                                         374 RLVHRIMAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDG--SPATEGELPTHE
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CURRENT FILING DATE: 2002-03-07
PRIOR APPLICATION NUMBER: USSN 60/274,322
PRIOR FILING DATE: 2001-03-08
PRIOR FILING DATE: 2001-04-13
PRIOR PILING DATE: 2001-04-13
PRIOR PILING DATE: 2001-12-03
PRIOR PILING DATE: 2001-12-03
PRIOR PILING DATE: 2001-12-03
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APPLICANT: Spytek, Kimberly A.
APPLICANT: Shenoy, Suresh G.
APPLICANT: Taupier Jr., Raymond
APPLICANT: Pena, Carol B.A.
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Gangolli, Esha A.
Vernet, Corine A.M.
Guo, Xiaojia Sasha
Tchernev, Velizar T
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Catterton, Elina
Leite, Mario W.
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Malyankar, Uriel M.
Gerlach, Valerie
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Gusev, Vladimir Y.
Ji, Weizhen
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Miller, Charles E.
Kekuda, Ramesh
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Anderson, David W.
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Lepley, Denise M.
Rieger, Daniel K.
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US-10-092-900A-352
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Testis-Specific Nucleic Acid Molecules, Polypeptides,
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CORGANISM: Homo sapiens
US-10-239-607-53
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US-09-895-040A-3
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                                                                                                                                                                                                                                                                                                                                           10;
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                                                                                                                                                                                                                                                                                                                                           Indels
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PRIOR FILING DATE: 2001-03-08

PRIOR APPLICATION NUMBER: USSN 60/274,191

PRIOR PILING DATE: 2001-03-08

PRIOR PELING DATE: 2001-03-08

PRIOR PELING DATE: 2001-09-27

PRIOR PELING DATE: 2001-07-10

PRIOR PELING DATE: 2001-07-10

PRIOR APPLICATION NUMBER: USSN 60/279,995

PRIOR PILING DATE: 2001-07-10

PRIOR PELING DATE: 2001-03-30

PRIOR PELING DATE: 2001-03-31

PRIOR PELING DATE: 2001-05-31

PRIOR PELING DATE: 2001-05-31

PRIOR PELING DATE: 2001-05-31

PRIOR PELING DATE: 2001-06-31
                                                                                                                                                                                         Remaining Prior Application data removed
NUMBER OF SEQ ID NOS: 768
SEQ ID NO 352
                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Homo sapiens
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Matches 266; Conser
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US-10-239-607-53
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THITPSYDMSPAMLSYLVKWMLAQAQESVFEKISLPG--IRNEFFMLVKVAQEAAKVGEVY 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RLVHRTMAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDG--SPATEGELPTHE 431
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                439 LOKVLCAAQERSRLTYAQHQEBDDLLNLIDAPSVVAKTEQEVDIILPQFSKLTVTDFFQK
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TITLE OF INVENTION: Diagnostic and Therapeutic Methods FILE REFERENCE: 50218/003002
CURRENT APPLICATION NUMBER: US/10/239,607
CURRENT FILING DATE: 2000-09-24
PRIOR PILING DATE: 2001-03-23
PRIOR PILING DATE: 2000-03-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: FASTESQ for Windows Version 4.0
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TITLE OF INVENTION: HUMAN GTP-RHO BINDING PROTEIN 2
FILE REFERENCE: ABONICA-LI
CURRENT APPLICATION NUMBER: US/09/895,040A
CURRENT FILING DATE: 2001-06-29
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VSVNGQPCRWWRHAEVVTELKAAGEAGASLQVVSLLPSS
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APPLICANT: Shannon, Mark APPLICANT: Ji, Yonggang
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74 GCDSLIQIQCGQLQSRRAQIHQQIDKELQMRIGAENLYRAISNNRVRETVALELSYVNSN 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   134 LQLLKEELEELSGGVDPGRHGSEAVTVPMIPLGLKETKELDWSTPLKELISVHFGEDGAS 193
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24 GCNPLAQTGRSKLQNQRAALNQQILKAVRMRIGAENLLKVATNSKVREQVRLELSFVNSD 83
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33.1%; Score 1249; DB 9; Length 6
Best Local Similarity 45.8%; Pred. No. 3e-100;
Matches 265; Conservative 107; Mismatches 197; Indels
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PRIOR APPLICATION NUMBER: PCT/USO1/00666

PRIOR FILING DATE: 2001-01-30

PRIOR PILING DATE: 2001-01-30

PRIOR PILING DATE: 2001-01-30

PRIOR FILING DATE: 2001-01-30

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ORGANISM: Homo sapiens
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Search completed: July 13, 2004, 12:22:09 Job time : 429 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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OM protein - protein search, using sw model

July 13, 2004, 08:26:41; Search time 25 Seconds (without alignments) 1505:869 Million cell updates/sec Run on:

Title: Perfect score:

US-10-697-266-2 3774 1 MILBERPDGAGAGEESPRLQ......QPCAPVKPAPPSSLKHPGWP 723 BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table: Seguence:

141681 seqs, 52070155 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_42:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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SUMMARIES	ID	RHN1 HUMAN	RHN1 MOUSE	PQ58 CABEL	PD61 HUMAN	PD6I MOUSE	PD61 XENLA	BRO1 YEAST	PKL1 HUMAN	PKL1 RAT	EMI1 MOUSE	ARHB HUMAN	USIC_MOUSE	ARHB RAT	EMI1 HUMAN	ARHC HUMAN	KFC2 HUMAN	SPCQ_HUMAN	RGSC_RAT	SMC MYCTU	AIP1 HUMAN		ARHC_MOUSE	PLE1 HUMAN	PLE1_RAT	YAB5_SCHPO	AIP1 MOUSE	PLE1_CRIGR	LMA4 HUMAN	AIP1 RAT	MUTS THECA	RGSC HUMAN	MUTS_THETH	PCT2_MOUSE
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	Result No.		7	m	4	5	9	7	89	σ	10	11	12	13	14	15	16	17	18	19	50	21	22	23	2,4	25	56	27	28	29	30	31	32	33

Q9qxz0 mus musculu Q9pw72 gallus gall Q9ccq3 mycobacteri P23470 homo sapien Q9vgx3 drosophila P47997 oryza sativ O14647 homo sapien P98171 homo sapien Q9bv73 homo sapien P7670 mycobacteri Q9bv73 homo sapien	
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119 118 118 116.5 116.5 116.5 116.116.5 116.116.116.116.116.116.116.116.116.116	
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ALIGNMENTS

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                                                                                                                                Homo sapiens (Human).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi;
Mammalia, Eutheria, Primates; Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                       76292 MW; 89E4DF6806761452 CRC64;
                                 10-OCT-2003 (Rel. 42, Created)
10-OCT-2003 (Rel. 42, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Rhophilin 1.
                   695 AA
                 PRT;
                                                                                                                                                                                                                                                                                                       HR1.
BRO1.
PDZ.
                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                     695 AA;
                                                                                                                          SEQUENCE FROM N.A.
                                                                                                        NCBI_TaxID=9606;
                 RHN1 HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
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        RHN1_HUMAN
RESULT 1
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Gaps 18; Length 695; Indels 90.6%; Score 3419; DB 1; 89.4%; Pred. No. 1.1e-218; ive 0; Mismatches 1; 89.48; Best Local Similarity 89.4 Matches 669; Conservative Query Match

1 MILEERPDGAGAGEESPRLQISRRKPRKTRVSSLRGRREGLRDVCAWRGCRVHRGEDPVR 60

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455
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                                                                                                 68 ETVALELSYVNSNLQLLKESLBELSGGVDPGRHGSEAVTVPMIPLGLKETKELDWSTPLK 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
TISSUB-Brain, and Embryo;
TISSUB-Brain, and Embryo;
MEDLINE-96165390; PubMed-8571126;
Watanabe G., Saito Y., Madaule P., Ishizaki T., Fujisawa K., Morii N.,
Mukai H., Ono Y., Kakizuka A., Narumiya S.;
"grotein kinase N (FKN) and PKN-related protein rhophilin as targets
of small GTPase Rho.";
Science 271:645-648(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               548 FGLTLRGDSPVLIAAVIPGSQAAAAGLKEGDYIVSVNGQPCRWWRHAEVVTELKAAGEAG
                         VHVGPMNPQLHAVGCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVR
                                                                                                                                                      RAAGAFSLIRENFSHAPSPDMSAASLCALEQLMMAQAQECVFEGLSPPASMAPQDCLAQL
                                                                                                                                                                                                                                                                     RAAGAFSLLRENFSHAPSPDMSAASLCALEQLMWAQAQECVFEGLSPPASMAPQDCLAQL
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                                                                                                                                                                                                                                                                                                                        RECPPHLPMVLPRPPRAGSQPLCPPAATEGELPTHEQVFLQPPTSSKPRGPVLPQELEER
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                                                                               ETVALELSYVNSNLQLLKEELEELSGGVDPGRHGSEAVTVPMIPLGLKETKELDWSTPLK
                                                                                                                                       ELISVHFGEDGASYEAEIRELEALRQAMRTPSRNESGLELLTAYYNQLCFLDARFLTPAR
                                                                                                                                                                                             SLGLFFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAEAPDIQPKTHQKPEARMPRLSQGKGPDIFHRLGPLSVFSAKNRWRLVGPVHLTRGEGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus (Mouse).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-JUL-1999 (Rel. 38, Created)
15-JUL-1999 (Rel. 38, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
RhDhllin I (GTP-Rho binding protein 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QGKTGGCPQPCAPVKPAPPSSLKHPGWP 695
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MILEER PDGAGAGEES PRLQ-
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isp-sib.ch).
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-i- FUNCTION: Binds specifically to GTP-Rho. May serve as a target for Rho. It has no enzymatic activity. It may interact with some cytoskeletal component upon Rho binding or relay a Rho signal to other molecules.
-i- TISSUE SPECIFICITY: Highly expressed in testis.
-i- SIMILARITY: Contains 1 BR01 domain.
-i- SIMILARITY: Contains 1 PDZ/DHR domain.
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R HSSP; P29476; 102AV.
RGD, MGI.1098783; Rhpnl.
R GO; GO:0005083; F:small GTPase regulatory/interacting protein. ..; I
R InterPro; IPR004328; BRO1.
R InterPro; IPR00438; PDZ.
R InterPro; IPR00458; PDZ.
R InterPro; IPR00458; PDZ.
R Ffam; PF03097; BRO1; 1.
R Pfam; PF03097; BRO1; 1.
R Pfam; PF03095; PDZ; 1.
R SWART; SM0074; HRI; 1.
R SWART; SM00278; PDZ; 1.
R PROSITE; PS50106; PDZ; 1.
PROSITE; PS50106; PDZ; 1.
T DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61.8%; Score 2331; DB 1; 67.0%; Pred. No. 9.7e-147;
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us-10-697-266-2.rsp

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Pfam; PF03097; BRO1; 1.
                                                                                 Best Local Sim
Matches 132;
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                                SEQUENCE
                                                                 Query Match
                  DOMAIN
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                                    600
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Bonfield J., Burton J., Connell M., Copsey T., Cooper J., Coulson A.,
Craxton M., Dear S., Du Z., Durbin R., Favello A., Fraser A.,
Fulton L., Gardner A., Green P., Hawkins T., Hillier L., Jier M.,
Johnston L., Jones M., Kershaw J., Kirsten J., Laisster N.,
Latreille P., Lightning J., Lloyd C., Mortimore B., O'Callaghan M.,
Parsons J., Percy C., Rifken L., Rooper A., Saunders D., Shownkeen R.,
Sims M., Smaldon N., Smith M., Sonnhammer B., Staden R.,
Sulston J., Thierry-Mieg J., Thomas K., Vaudin M., Vaughan K.,
Waterston R., Watson A., Weinstock L., Wilkinson-Sproat J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEGLET 1801 NO. STRAIN=Bristol NO. MEDLINE=Bristol NO. MEDLINE=98087404; PubMed=9427532; MEDLINE=98087404; PubMed=9427532; Che S., Weil M.M., Etkin L.D., Epstein H.F., Kuang J.; Molecular cloning of a splice variant of Caenorhabditis elegans YNK1, a putative element in signal transduction."; Biochim. Biophys. Acta 1354:231-240(1997).
                                                                                                                     541 KGPDIFHRLGPLSVFSAKNRWRLVGPVHLTRGEGGFGLTLRGDSPVLIAAVIPGSQAAAA
                                                     ------GPLSVFSTKNRWQLVGPVHMTRGEGGFGFTLRGDSPVLJAAVVPGGQAESA
                                                                                                  601 GLKEGDYIVSVNGQPCRWWRHAEVVTELKAAGEAGASLQVVSLLPSSRLPSLGDRRPVLL
                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota, Metazoa, Nematoda, Chromadorea, Rhabditida, Rhabditoidea,
Rhabditidae, Peloderinae, Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "2.2 Mb of contiguous nucleotide sequence from chromosome III of C.
   433 RVLRKVDLLQVVVTQALRRSLAKYSQLEREDDFFEATEAPDIQPKTHQTPE--
                                                                                                                                                                                        Submitted (OCT-2000) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: Probably involved in signal transduction.
-!- SIMILARITY: TO MAMMALIAN GRBP; SOME, TO YEAST BROI.
                                                                                                                                                                   661 GPRGLLRSQREHGCKTPASTWASPRPLLNWSRKAQQGKTGGCPQPC
                                                                                                                                                                                                                                                                                                       P34552; Q94159;
01-FFB-1994 (Rel. 28, Created)
16-CFT-2001 (Rel. 40, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
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MEDLINE=94150718; PubMed=7906398;
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PQN-58 OR R10E12.1.
                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                         Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nature 368:32-38(1994).
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EMBL; U73679; AAC67305.1; -. EMBL, Z29561; CAA82667.2; -WormPep; R10E12.1; CE25075. InterPro; IPR004328; BR01.

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314 HARAKKDNDFIYHEKVSDFR-TLPTLPKAVLAKPTPMQTPMTPSFRDMFAVLVPVQVHNA 372
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 605 GDYIVSVNGQPCRWWRHAEVVTELKAA--GEAGASLQVVSLLPSSRLPSLGDRRPVLLGP 662
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       131 SIMSQIGAAQQFHTDDEIKVSAKLFQQSAGVFARLRDVVLGMVQQEPTPDLMPDTLAALS 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  331 QLMMAQAQECVFEGLSPPASMAPQDCLAQLRLAQEAAQVAAEYRLVHRTMAQPPVHDYVP 390
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       391 VSWTALVHVKAEYFRSLAHYHVAMALCDGSPATEGELPTHEQVFLQPPTSSKPRGPVLPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    504 YAELDREDDFCEAAEAPDIQPKTHQKPEARMPRLSQGKGP-----DIFHRLGPLSVFSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       451 ELEERRQLGKAHLKRAILGQEEALRLHALCRVLREVDLLRAVISQ-----TLQRSLAK-
                                                                                                                                                                                                                                                                        167 LKETKELDWSTPLKELIS--VHFGEDGASYEAE-IRELEALR-QAMRTP-SRNESGLELL
                                                                                                                                                                                                                                                                                                                         11 LKSTNEVDLVKPLISYIDNVXNISDNNRSDVABAVQELNKLRSKACCQFLDKHQSALDVL
                                                                                                                                                                                                                                                                                                                                                                                                                                    TAYYNQLCFLDARFLTPARSLGLFFHWYDSL-TGVPAQQRAL----AFFKGSVLFNIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           71 TRYYDOLVAIENKIIISATQNPVVFKWKDAFDKGSLFSSRASLSLSDGSFERAAVLFNIG
                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----VLASLNLPAAL
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCHI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PD61 HUMAN STANDARD; PRT; 868 AA.

QBWUD4; QBRSE6; QBNUNO; Q9P2H2; QBUKL5;

10-OCT-2003 (Rel. 42, Created)

10-OCT-2003 (Rel. 42, Last sequence update)

10-OCT-2003 (Rel. 42, Last annotation update)

10-OCT-2003 (Rel. 42, Last annotation update)

10-OCT-2013 (Rel. 42, Last annotation update)

10-OCT-2013 (Rel. 42, Last annotation update)

10-OCT-2013 (Rel. 42, Last annotation update)

10-OCT-2013 (Rel. 42, Last annotation update)

10-OCT-2013 (Rel. 42, Last annotation update)

10-OCT-2013 (Rel. 42, Last annotation update)

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10-OCT-2013 (Rel. 42, Last annotation update)

10-OCT-2013 (Rel. 42, Last annotation update)

10-OCT-2013 (Rel. 42, Last annotation update)

10-OCT-2013 (Rel. 42, Last annotation update)

10-OCT-2013 (Rel. 42, Last annotation update)

10-OCT-2013 (Rel. 42, Last annotation update)
                                                                                                                                                                                             Indels 139;
                                                                                                                           Length
756 861 GLN-RICH.
861 AA; 96245 MW; F2F600623FF74965 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     493
                                                                                                                   7.5%; Score 284.5; DB 1;
22.8%; Pred. No. 3.7e-11;
iive 98; Mismatches 209;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          663 RGLLRSQREHGCKTPASTWASPRPLLNWSRKAQQGKTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        244 KDWSAIVSGKNLAYQALAQYHQS-EVCG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   373 MOSYDARKAELVNMETVRMREATQLMNG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
Li H., Shioda T., Isselbacher K.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
MEDLINE=21539686; PubMed=11683497;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fferentiation 67:139-153(2001)
                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (Human)
                                                                                                                                                                     Similarity
```

EMBL; AB037796; BAA92613.1;

```
TISSUE=Lymph,

X MEDLINE=22388257; PubMed=12477932;

X Strausberg R.L., Ferbigold E.A., Grouse L.H., Derge J.G.,

A Strausberg R.L., Ferbigold E.A., Grouse L.H., Derge J.G.,

A Altschul S.F., Zeeberg B. Buetow K.H., Schaefer C.F., Bhat N.K.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F. Woore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F. Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

BA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

B Lownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

B Romstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA B B S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA B B S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

R. Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

R. Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

R. Alleton E., Ketteman M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

R. Miting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

R. Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

R. Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;

and monse chuk A. Schein Jaralysis of more than 15,000 full-length human and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Placenta,
Isogai T., Ota T., Hayashi K., Sugiyama T., Otsuki T., Suzuki Y.,
Nishikawa T., Nagai K., Sugano S., Shiratori A., Sudo H.,
Magatsuma M., Hosoiri T., Kaku Y., Kodaira H., Kondo H., Sugawara M.,
Takahashi M., Chiba Y., Ishida S., Murakawa K., Ono Y., Takiguchi S.,
Matanabe S., Kimura K., Murakami K., Ishii S., Kawai Y., Saito K.,
Yamamoto J., Wakamatsu A., Nakamura Y., Nagahari K., Masuho Y.,
Ninomiya K., Iwayanagi T.,
"NEDO human cDNA sequencing project.";
Submitted (FBB-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for large proteins in vitro.";

DNA Res. 7.65-73(2000).

-!- FUNCTION: May play a role in the regulation of both apoptosis and cell proliferation.

-!- SUBUNIT: Interacts with PDCD6/ALG-2 and SH3KBP1 (By similarity).

-!- SIMILARITY: Contains 1 BR01 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nagase T., Kikuno R., Ishikawa K.-I., Hirosawa M., Ohara O., "Prediction of the coding sequences of unidentified human genes. XVI
The complete sequences of 150 new cDNA clones from brain which code
                                                                                               Kaınıne N., Chen X., Rolfs A., Halleck A., Hines L., Eisenstein S., Koundinya M., Raphael J., Moreira D., Kelley T., Labaer J., Lin Y., Phelan M., Farmer A.;
"Cloning of human full-length CDSs in BD Creator(TM) system donor
  "Molecular cloning of human ALG-2 interacting protein 1 (AIP1)."; Submitted (MAY-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                         Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=20181126; PubMed=10718198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 209-868 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 323-868 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and mouse cDNA sequences."
                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                       rector
```

BC020066; AAH20066.1; -. AK002122; BAA92092.1; ALT_INIT.

AAP36031.1; -.

BT007367; AF151793;

EMBL; EMBL;

EMBL; AF349951; AAK20398.1; -.

```
163 IPLGLKETKELDWSTPLKELISVHF---GEDGASYEAEIRELEALRQAM--RTPSRNESG 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FNIGALHTQIGARQDRSCTEGARRAMEAFQRAAGAFSLLREN----FSHAPSPDMSAASL 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           327 CALEQIMMAQAQECVFEGLSPPASMAPQDCLAQLRLAQEAAQVAAEYRLVHRTMAQPPVH 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   387 DYVPVSWTALVHVKAEYFRSLAHYHVAMALCDGSPATEGELPTHEQVFLOPPTSSKPRGP 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               495 QTLQRSLAKYABLDREDDFCEAAEAPDIQ-----PKTHQKPEARMPRLSQGKGPDIFHR 548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  : |:| | ::|| DKINRAL---AAAKKDNDFIYHDRVPDLKDLDPIGKATLVKSTPVNVPISQ-KFTDLFEK 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | : ||:| |:| |:| | : | | : | | : | |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:| |:|
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---IS 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           185 GTLSLIMLAQAQEVFF-----LKATRDKWKDAIIAKLANQ-AADY--FGDAFKQCQYK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PD61 MOUSE STANDARD; PRT; 869 AA.

Q9WU78; Q88695; O89014; Q8BSL8; Q9ROH5; Q99LR3; Q9QZN8;

10-OCT-2003 (Rel. 42, Last sequence update)

10-OCT-2003 (Rel. 42, Last sequence update)

Programmed cell death 6 interaction update)

X) (ALG-2 interacting protein (ALG-2 interacting protein PDCD61P OR ALIX OR ALIX.) (E2F1-inducible protein) (Eig2).

Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          218 LELLTAYYNQLCFLDARFLTPARSLGLFFHWYD----SLTG--VPAQQRALAFEKGSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            235 DTLP-----KEVFPVLAAKHCIM-----QANAEYHQSI------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----LAKQQKK---FGEETARLQHA----AELIKTVASRYDEYVNVKDFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=99218669; PubMed=10200558; Missotten M., Nichols A., Rieger K., Sadoul R.; "Alix, a novel mouse protein undergoing calcium-dependent interaction with the apoptotic-linked-gene (ALG-2) protein.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. (ISOFORMS 1 AND 2), AND INTERACTION WITH PDCD6
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 1.7e-10;
57; Mismatches 152; Indels 101;
                                                                                                                                                                                                                                                                                                                                                                                                                                  7.3%; Score 274.5; DB 1; Length 868;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 447 VLPQELEERRQLGKAHLKRAILGQEEALRLHALCRVLREVDLLRAV-
                                                                                                                                                                                                                              A -> T (IN REF. 2).
V -> I (IN REF. 5).
N -> S (IN REF. 1 AND 6).
M -> T (IN REF. 5).
S -> L (IN REF. 2).
                                                                                                                                                                                                                                                                                                                                                                         57358BD1F612EC93 CRC64;
                                                                                                                                                                                                   PRO-RICH.
                                                                                                                                                                         167 BR
860 PR
309 A
378 V
550 N
580 M
730 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                         27.2%;
                          HGNC:8766; PDCD6IP.
                                                  MIM; 608074; -.
InterPro; IPR004328; BRO1.
Pfam; PF03097; BRO1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 116; Conservative
                                                                                                                                                                                                                                                                                                                                                                      868 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               549 LGPLSV 554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MVPVSV 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090;
                                                                                                                                                                                                   717
309
378
550
580
730
                                                                                                                                           Apoptosis.
                                                                                                                                                                                                                                                                                CONFLICT
CONFLICT
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RC STRAIN=CSTBL/6J; TISSUBE-FORELIMD;

RX SEQUENCE FKOM N.A. LISCHORM 3).

RX OARARAI Y., FURTUND M., KRANIKAWA T., Adachi J., Bono H., Kondo S.,

RA OARARAI Y., FURTUND M., KRANIKAWA T., Adachi J., Bono H., Kiyosawa H.,

RA SAGARAI Y., Hasegawa Y., Nogami A., Schonbach C., Gojobori T.,

RA Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,

RA Baldarelli R., Ananapin A., Matsud H., Baralov S., Beisel K.W.,

RA Balacelli R., Fanapin A., Matsud H., Baralov S., Beisel K.W.,

RA Balacelli R., Fanapin A., Matsud H., Baralov S., Beisel K.W.,

RA Balacelli R., Faraboldi M., Gissi C., Corbani L.E., Cousins S.,

RA Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis B.D.,

RA Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis B.D.,

RA Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis B.D.,

RA Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis B.D.,

RA Grimmond S., Gustincich S., Hirokawa N., Kadiserski R.M., King B.L.,

RA Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Narvis B.D.,

RA Maglott D.R., Maltais L., Marchionni L., McKenzie L., Miki H.,

RAGIOTT N., Maltais L., Marchionni L., McKenzie L., Miki H.,

RAGIOTT N., Schneider C., Semple C.A., Sectou M., Shimada K.,

RA Sandelin A., Schneider C., Semple C.A., Sectou M., Shimada K.,

RA Jultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,

Vana Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,

Hirozane-Kishikawa T., Konno H., Makamura M., Sakazume N., Sakai K.,

RAMING L.G., Mynshaw-Boris A., Yanagisawa T., Fukuda S.,

Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N.,

RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N.,

RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N.,

Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N.,

Hirozane-Kishikawa T., Kawai J., Aizawa T., Fuhuka S.,

Hara A., Hashizume W., Imotani K., Ishinayawa T.,

Hayazaki A., Yoshino M., Waterston R., Lander E.S., Rogers J.,

Malanyais of the mouse transcriptome based on functi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDINE=2238827; Pubbled=12477912;
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Altasner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B. Buetow K.H., Schaefer C.F., Bhat N.K.,
Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsich F.,
Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsich F.,
Antschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsich F.,
Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Frange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Bosak S.A., McKwan P.J., McKernan K.J., Malek J.A., Gunarathe P.H.,
Richards S., Worley K.C., Hale S., Gardan A.M., Gay L.J., Hulyk S.W.,
Anting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Rodiguez A.C., Grimwood J., Schmutz J., Myers R.M.,
Butterfield Y.S.M., Krzywinski M.I., Skalska U., Smailus D.E.,
Butterfield Y.S.M., Krzywinski M.I., Skalska U., Smailus D.E.,
M. Manne A.M., Schein J.E., Jones S.J.M., Marra M.A.;
T. "Generation and initial analysis of more than 15,000 full-length human
                                                                                                       Vito P., Pellegrini L., Guiet C., D'Adamio L.;
"Cloning of AIP1, a novel protein that associates with the apoptosis-
linked gene ALG-2 in a Ca2+-dependent reaction.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=C57BL/6J; TISSUE=Forelimb;
MEDILNES=20027348; PubMed=10556317;
Wang A.J., Pierce A., Judson-Kremer K., Gaddis S., Aldaz C.M.,
Johnson D.G., MacLeod M.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
Cell Death Differ. 6:124-129(1999)
                                                                                                                                                                                           Biol. Chem. 274:1533-1540(1999)
                                                   SEQUENCE FROM N.A. (ISOFORM 1).
MEDLINE=99098896; PubMed=9880530;
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                                                                                                                                                                                                                                              SEQUENCE FROM N.A. (ISOFORM 3)
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-!- BUNDIN: Interaction with PDCD6/ALG-2 and SH3KBP1 (By similarity).
-!- ALTERNATIVE PRODUCTS: 69 LRYYDQICSIEPKPPFSENQICLTFTWKDAFDKGSLFGGSVKLALASLGYEKSCVLFNCA ; Pred. No. 5.9e-10; 60; Mismatches 151; Indels 101; Gaps 7.1%; Score 266.5; DB 1; Length 869; /FTT-ALFIEW ... I EXCLUSION ... / FTT-ALFIEW ... I EXCLUSION ... / FTT-ALFIEW ... / FTT-ALFIEW ... / FTT-ALFIEW ... / FTT-ALFIEW ... / FTT-ALFIEW ... / SGYR (UR REF. 2) ... / (IN REF. 2) ... / (IN REF. 2) ... / (IN REF. 2) ... / (IN REF. 2) ... / (IN REF. 2) ... / (IN REF. 2) ... / (IN REF. 1) ... / K -> KYFYFQ (in isoform 3) 9AA84B592FDCEA5E CRC64; Event=Alternative splicing; Named isoforms=3; Isold=Q9WU78-3; Sequence=VSP 007501;
-!- TISSUE SPECIFICITY: UbiquitousTy expressed.
-!- SIMILARITY: Contains 1 BRO1 domain. Name=2; Synonyms=Alix-SF, Short; IsoId=Q9WU78-2; Sequence=VSP_007502; Note=Does not interact with ALG-2; IsoId=Q9WU78-1; Sequence=Displayed; Pfam; PF0309/; and, Apoptosis; Alternative splicing. DOMAIN 167 BR01. Nucleic Acids Res. 27:4609-4618(1999) EMBL, AJ005073; CAA06329.1; -.
EMBL, AJ005074; CAA06330.1; -.
EMBL, AF119955; AAD26813.1; -.
EMBL, AK031256; BAC27323.1; -.
EMBL; BC002251; AAH2261.1; -.
EMBL; BC026823; AAH26823.1; -.
EMBL; AF176514; AAD53115.1; -. MGD; MGI:1333753; Pdcd6ip. GO; GO:0005829; C:cytosol; IDA. InterPro; IPR004328; BRO1. 96010 MW; 26.1%; Best Local Similarity 26.14 Matches 110; Conservative , BRO1; 1 239 595 625 640 821 853 869 AA; 239 Pfam; PF03097 Name=1; CONFLICT CONFLICT CONFLICT CONFLICT CONFLICT SEQUENCE CONFLICT VARSPLIC VARSPLIC Query Match CONFLICT g G δ Q ð d à

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24.5%; Fir
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BRO1 OR YPL084W OR LPF2.
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                                  Similarity
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                      Best Local Sim:
Matches 106;
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Query Match
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                                                                                                                                                ELEERROLGKAHLKRAILGGEEALRLHALCRVLREVDLLRAV------ISQTLQ 498
                                                                                                                                                                                                                                                                                                                                     391 VSWTALVHVKAEYFRSLAHYHVAMALCDGSPATEGELPTHEQVFLQPPTSSKPRGPVLPQ 450
                                                                                                                                                                                                                    -----LAKQQKK---FGEELARLQHA-----AELIKNVASRYDEYVNVKDFSDKIN 305
                                                                                                                                                                                                                                                                                            RSLAKYAELDREDDFCEAAEAPDIQ-----PKTHQKPEARMPRLSQGKGPDIFHRLGPL 552
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MEDLINE=99150334; PubMed=10026166;
Che S., El-Hodiri H.M., Wu C.-F., Nelman-Gonzalez M., Weil M.M.,
Elkin L.D., Clark R.B., Kanng J.;
"Identification and cloning of Xp95, a putative signal transduction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-0CT-2003 (Rel. 42, Created)
10-0CT-2003 (Rel. 42, Last sequence update)
10-0CT-2003 (Rel. 42, Last annotation update)
Programmed cell death 6 interacting protein (Signal transduction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Klein S., Strausberg R.L.;
Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases.
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/FTId=vSP 007503.
6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)6BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overline{6}\)7BE7173\(\overlin
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PRO-RICH.
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EMBL; BC043849; AAH43849.1; ALT_INIT.
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Xenopus laevis (African clawed frog)
                                                                    KEVFPTLAAKOCIMOANAEYHOSI - - -
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J. Biol. Chem. 274:5522-5531(1999).
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PD61 XENLA

DD 10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT-10-0CT
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16;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       493 ----ISQTLQRSLAKYAELDREDDFCEAAEAPDI------QPKTHQKPEARMPRLSQGK
                                                                                     158 VIVPMIPLGLKETKELDWSTPLKELISVHF--GEDGASYEAEIRELEALRQAM--RTPSR
                                                                                                                                                                               --GVPAQORALAFEK
                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=2288C / MABY 2, MEDINE-97313271; PubMed=9169875; MEDLINE=97313271; PubMed=9169875; MEDLINE=97313271; PubMed=9169875; MEDLINE=97313271; PubMed=9169875; MEDLINE=97313271; PubMed=9169875; MEDLINE=97313271; PubMed=N., Albermann K., Alneas V., Botstein D., Bowman S., Bruckner M., Carpenter J., Cherry J.M., Chung B., Churcher C.M., Coster F., Davis K., Davis R.W., Dincher C.M., Coster F., Davis K., Davis R.W., Dincher F.S., Deling H., Dipaolo T., Dubois B., Duesterhoeft A., Hall J., Hebling U., Heumann K., Hilbert H., Hillier L.W., Hunicke-Smith S., Hyman R., Johnston M., Kalman S., Kleine K., Komp C., Kurdi O., Lashkari D., Lew H., Lin A., Lin D., Louis B.J., Marathe R., Messenguy F., Mewes H.-W., Mirtipati S., Moestl D., Meeller-Auer S., Namath A., Nentwich U., Oefner P., Pearson D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             443 PRGPVLPQELEERRQLGKAHLK--RAILGQEEALRIHALCRVLREVDLLRAV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Saccharomyces cerevisiae (Baker's yeast).
Eukaryota, Fungi, Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetales; Saccharomycetaceae; Saccharomyces.
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"BRO1, a novel gene that interacts with components of the
Pkclp-mitogen-activated protein kinase pathway in Saccharomyces
                                          111;
Length 867;
                                                                                                                                                                                                                                                                                                                                                                                                      180 PDTVGTLSLIMLAQAQEVFF-----LKATRDKMKDAVIAKLANQAA-
                                          Indels
                                                                                                                                                                               214 NESGLELLTAYYNOLCFLDARFLTPARSLGLFFHWYDSLT---
6.9%; Score 261.5; DB 1;
24.5%; Pred. No. 1.3e-09;
                                            Mismatches 144;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----YGDAFKQCQ---
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01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
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us-10-697-266-2.rsp

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             162 MIPLGLKETKELDWSTPLKELISVHFGED--GASY-EAEIRELEALRQ----AMRTPSRN 214
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                178 ANICHAEAQELFVLKLINDQISSKQYTLISKLSRA----TCNLFQKCHDFMKE--IDDD 230
Petel F.X., Pohl T.M., Purnelle D., Schafer M., Scharfe M., Scherens B., Schramm S., Schroeder M., Sdicu A.M., Tettelin H., Urrestarazu L.A., Ushinsky S., Vierendeels F., Vissers S., Voss H., Walsh S.V., Wambutt R., Wang Y., Wedler E., Wedler H., Winnett E., Zhong W.W., Zollner A., Vo D.H., Hani J.; Wedler H., Winnett E., "The nucleotide sequence of Saccharomyces cerevisiae chromosome XVI."; Nature 387.103-105 (1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          215 ESGLELLTAYYNQLCFLDARFLTPARSLGLFFHWYD----SLTGVPAQQRALAFEKGSV
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016512; 015143;
15-UUL-1999 (Rel. 38, Created)
15-UUL-1999 (Rel. 38, Last sequence update)
10-CCT-2003 (Rel. 42, Last annotation update)
Protein kinase C-like 1 (EC 2.7.1.-) (Protein-kinase C-related kinase L) (Protein kinase C-like PKN) (Serine-threonine protein kinase N);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (Human).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; U37364; AAB07790.1; -.

EMBL; U41849; AAB68255.1; -.

PIR; SG1104; S61104.

Germonline; 144066; -.

SGD; S0006005; BRO1.

GO; GO:0005768; C:endosome; IDA.

GO; GO:0005768; F:intracellular transporter activity; IDA.

GO; GO:0005165; P:signal transduction; IMP.

GO; GO:0007034; P:vacuolar transport; IMP.

HALEPPO; IRPO4328; BRO1.
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359 359 Y -> C (IN REF. 2).
844 AA; 97335 MW; 344905ADB845FFFB CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                231 VAIYGEPKWKTTVTCKLHFYKSLSAYYH 258
                                                                                                                                                                                                                                                                                                  pathway.
-!- SIMILARITY: Contains 1 BRO1 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              76; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF03097; BRO1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
              пp
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -!- SUBCELLILLAR LOCATION: Cytoplasmic (By similarity).
-!- TISSUE SPECIFICITY: Found ubiquitously. Expressed in heart, brain, placenta, lung, skeletal muscle, kidney and pancreas.
-!- PTM: Autophosphorylated; preferably in serine.
-!- PTM: Activated by limited proteolysis with trypsin (By similarity).
-!- SIMILARITY: Belongs to the Ser/Thr family of protein kinases. PKC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mukai H., Ono Y.;
"A novel protein kinase with leucine zipper-like sequences: its
catalytic domain is highly homologous to that of protein kinase C.";
Biochem. Biophys. Res. Commun. 199:897-904(1994).
-!- FUNCTION: CAN PHOSPHORYLATE RIBOSOMAL PROTEIN S6. MEDIATES GTPASE
RHO DEPENDENT INTRACELLUAR SIGNALLING (BY SIMILARITY).
-!- ENZYME REGULATION: Activated by lipids, particularly cardiolipin
and to a lesser extent by other acidic phospholipids (By
similarity).
                                                                                                                                                                                                                                                                                                                                                   MEDLINE=95154310; PubMed=7851406;
Palmer R.H., Ridden J., Parker P.J.;
"Cloning and expression patterns of two members of a novel protein-kinase-C-related kinase family.";
                                                         SEQUENCE FROM N.A.
MEDLINE=95080426; PubMed=7988719;
Palmer R.H., Ridden J., Parker P.J.;
"Identification of multiple, novel, protein kinase C-related gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MIM, 601012; -
Ocy GO:0004672; F:protein kinase activity, TAS.
GO: GO:0007257; P:activation of JUNK; TAS.
GO: GO:000468; P:protein amino acid phosphorylation; TAS.
GO: GO:0007165; P:signal transduction; TAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A., AND MUTAGENESIS OF LYS-644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00069; pxinase; 1.
Pfam; PF00043; pxinase C; 1.
ProDom; PD000001; proc_kinase; 1.
SMART; SM00239; C2; 1.
SMART; SM00133; C2; 1.
SMART; SM00133; STK X; 1.
SMART; SM00120; STK X; 1.
PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000008; C2.
InterPro; IPR000961; Pkinase C.
InterPro; IPR000961; Pkinase C.
InterPro; IPR000961; Prot kinase.
InterPro; IPR000861; REM repeat.
InterPro; IPR008271; Ser_thr_pkin_AS.
InterPro; IPR002290; Ser_thr_pkin_ase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eur. J. Biochem. 227:344-351(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=94183274; PubMed=8135837;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; U33053; AAC50209.1; -.
EMBL; S75564; AAB33345.1; -.
EMBL; D26181; BAA05169.1; -.
PIR; JC2129; JC2129.
PDB; ICXZ; Z3-MXY-00.
Genew; HGNC:9405; PRKCL1.
                                                                                                                                                                                                                               FEBS Lett. 356:5-8(1994).
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                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
TISSUE=Fetal brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Hippocampus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                subfamily.
                                                                                                                                                                                          products."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           382 KAEAENTSEVSTVLKLDNTVVGQTSWKPCGPNAWDQSFTLELERARE----LELAVFWR 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          478 NPVIERIPRLRROKKIFSKOOGKA---FORAROMNIDVA--TW-----VRLLRRLIPNAT 527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GEGGFGLTLRGDSPVLIAAVIPGSQAAAAGLKEGDXIVSVNGQPCRWWRHAEVVTELKAA 631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GEAGASLQVVSLLPSSRLPSLGDRRPVLLGPRGLLRSQREHGCKTPASTWASPRPLLNWS 691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                --OESTAPELPSETQETPGPAL--- 601
                                                                                                                                                                                                                                                                                         QLHAVGCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSN-NRVRETVALEL 127
                                                                                                                                                                                                                                                                                                                                                                                                                                     ----LQDSKTKIDIIRMQLRRALQADQLENQAAPDDTQGSP--DLGAVELRIEELRHHF 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RODRSCTEGARRAMEAFORAAGAFSLLRENFSHAPSPDMSAASLCALEOLMMAOAQECVF 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EGLSPPASMAPQDCLAQLRLAQBAAQVAAEYRLVHRTMAQPPVHDY----VPVSWTALVH 398
                                                                                                                                                                                                                                                                                                           EALERRIGELPAD-HPKGRLIREELAAASSAAFSTRLAGPFPATHYSTLCKPAPLIGTLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGTF----SP----GASPGSEARTTG-----DISVE-----KLNLG
                                                                                                                                                                                                                                                                                                                                                        128 SYVNSNLQLLKEELEELSGGV---DP-GRHGSEAVTVPMIPLGLKETKELDWSTPLKELI
                                                                                                                                                                                                                                                                                                                                                                                                                   184 SVHFGEDGASYEA-EIRELEALRQAMRIPSRNESGLELLIAYYNQLCFLDARFLIPARSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---KGSVLFNIGALHTQIGA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RVEHAVAEGAKNVLRL------LSAAKAPDRKAVSEAQEKLTESNQKLGLLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              328 VRVVGCRDLPETIPWNPTPSM--GGPGT----PDSRPPFLSRPARGLYSRSGSLSGRSSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----TSSKPRGP----VLPQELEERRQLGKAHLKRAILGQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EEALRLHALC--RVLREVDLLRAVISQTLQRSLAKYAELDREDDFCEAAEAPDIQPKTHQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KPE-ARMPRL-----SQGKGPDIFHRLGPLSVFSAKNRWRLVGPVHLTR-----
                                                                                                                                                                                                                                                              247;
                                                                                                                                                                                                                               DB 1; Length 942;
                                                                                                                                                     K->R: SUBSTANTIAL REDUCTION OF AUTOPHOSPHORYLATION.
PROSITE; PS00108; PROTEIN_KINASE_ST; 1.
PROSITE; PS50011; PROTEIN KINASE_DOM; 1.
Transferase; ATP-binding; Sexine/threonine-protein kinase;
Phosphorylation; Polymorphism; 3D-structure.
                                                                                                                                                                                                                                               Pred. No. 0.012;
79; Mismatches 257; Indels
                                                                                                                                                                                                                                                                                                                                                                           RGSSRRLDLIHQQLQELHAHVVLPDPAATHDG-----PQSP-----
                                                                                                                                                                                                  103989 MW; A89E40DCAEF560E3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VKAEYFRSLAH---YHVAMALCDGSPATEGELPTHEQVFLQPP-
                                                                                                        BY SIMILARITY.
V -> I (in dbSNP:10846).
/FTIG=VAR_014937.
                                                                         ATP (BY SIMILARITY).
ATP (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                243 GLFFHWYDSLTGVP----AQQRALAFE-----
                                                                                                                                                                                     D -> G (IN REF
                                                              PROTEIN KINASE
                                                                                                                                                                                                                                  4.1%; Score 156.5;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ---CSPLRKSP 609
                                                                                                                                                                                                                                               21.4%;
                                                                                                                                                                                                                                                  Best Local Similarity 21.4
Matches 159; Conservative
                                                                         629
644
740
901
                                                                                                                                                        644
                                                                                                                                                                                       191
                                                                                                                                                                                                     942 AA;
                                                              615
621
644
740
901
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                                                                                          BINDING
ACT SITE
VARIANT
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                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                     CONFLICT
                                                                              BIND
                                                                                                                                                        MUTAGEN
                                                              DOMAIN
NP_BIND
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RESULT 9

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-2432755; PubMed=8051089;

Macrice N.A., Gabrielli B., Kemp B.E., Wettenhall R.E.;

Morrice N.A., Gabrielli B., Kemp B.E., Wettenhall R.E.;

"A cardiolipin-activated protein kinase from rat liver structurally

"I from the protein kinases C.";

"J. Biol. Chem. 269:20040-20046 (41994).

"I Biol. Chem. 269:20040-20046 (41994).

"I BIOL. Chem. 269:20040-20046 (41994).

"I BIOL. Chem. TORNACELLULAR SIGNALING.

"I ENDYMER REGULATION: Activated by lipids, particularly cardiolipin and to a lesser extent by other acidic phospholipids.

"I FUNCTION: Cytoplasmic."

"I FUNCTION: Cytoplasmic."

"I FTM: Autophosphorylated; preferably in serion.

"I FTM: Activated by limited proteolysis with trypsin.

"I FTM: Activated by limited proteolysis with trypsin.

"I Subfamily.
                                                             30-MAY-2000 (Rel. 39, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Protein kinase C-like 1 (EC 2.7.1.-) (Protein-kinase C-related kinase
1) (Protein kinase C-like PKN) (Serine-threonine protein kinase N)
                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus
                                                                                                                                                                                                                                                                                                                                                                     Ono Y., Mukai H.;
"A novel protein kinase with leucine zipper-like sequences: its
"A novel protein kinase with leucine zipper-like sequences: its
catalytic domain is highly homologous to that of protein Kinase C.";
Biochem. Biophys. Res. Commun. 199:897-904(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R InterPro; IPR000951; V. Camb.
R InterPro; IPR00019; Pror kinase.
R InterPro; IPR000861; Rem_repeat.
R InterPro; IPR00861; Rem_repeat.
R InterPro; IPR008290; Ser_thr_pkinase.
R Pfam; PF002185; HRI; 3.
InterPro; IPR008290; Ser_thr_pkinase.
R Pfam; PF00433; Pkinase. 1.
R Pfam; PF00433; Pkinase. 1.
R PROMORD; PR000001; Pror kinase; 1.
R SMART; SM00239; C2; 1.
R SMART; SM00239; C2; 1.
R SMART; SM00133; STKC; 1.
R SMART; SM00120; PROTEIN KINASE ST; 1.
R R PROSITE; PS00108; PROTEIN KINASE AT; 1.
R PROSITE; PS001107; PROTEIN KINASE AT; 1.
R PROSITE; PS001107; PROTEIN KINASE AT; 1.
R PROSITE; PS001107; PROTEIN KINASE AT; 1.
R PROSITE; PS001107; PROTEIN KINASE AT; 1.
R PROSITE; PS001107; PROTEIN KINASE AT; 1.
R PROSITE; PS001107; PROTEIN KINASE AT; 1.
R PROSITE; PS001107; PROTEIN KINASE AT; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROTEIN KINASE.
ATP (BY SIMILARITY)
ATP (BY SIMILARITY)
946 AA
                                                                                                                       1) (Protein kinase C-like PKN) (Serine (Protease-activated kinase 1) (PAK-1). PRKCLI OR PKKI OR PKN.
                                                                                                                                                                                                                                                                                                                            TISSUE=Lung;
MEDLINE=94183274; PubMed=8135837;
                    063433;
30-MAY-2000 (Rel. 39, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HSSP; P05132; 1ATP.
InterPro; IPR000008; C2.
InterPro; IPR008973; C2_CalB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; D26180; BAA05168.1; -.
  STANDARD;
                                                                                                                                                                                              Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Phosphorylation.
DOMAIN 619
NP BIND 625
BINDING 648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHARACTERIZATION.
                                                                                                                                                                                                                                                             NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Liver;
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us-10-697-266-2.rsp

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34;
                                                                                                                               127
                                                                                                                                                                                            SYVNSNLQLLKEELEELSGGV---DPGRHGSEAVTVPMIPLGLKETKELDWSTPLKELIS 184
                                                                                                                                                                                                                                      130
                                                                                                                                                                                                                                                                                                                                           283
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                                                                                                                                                                                                                                                                                                      ---GAENMIQTYSNGSTKDRKLLLTAQQM-- 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        287 KGRLLREELTAASSAAFSAILPGPFPATHYSTLSKPAPLT------GTLEVRVVGC 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  337 KNLPETIPWSPPRSVGASGTPDSRTPFLSRPARGLYNRS------GSLSGRSSLKGEA 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     428 PIHEQV-----FLOPPISSKPRGP----VLPQELEERRQLGKAHLKRAILGQEEAL 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           475 RIHALC--RVLREVDLIRAVISQTLQRSLAKYAELDREDDFCEAAEAPDIQPKTHQKP-E 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              442 --RGLCALKFLKLEDFL-----DNERHEVQLDMEPQGCLVAEV-----TFRNPII 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             532 ARMPRLSQGKGPDIFHRLGPLSVFSAKNRWRLVGPVHLTRGEGGFGLTLRGDSPVLIAAV 591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          525
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                                                                                                                                                                                                                             78 RGSARRLDLLHQQLQELHAHVVLPDP-TAGSDA-----PQSLAEGSPVCSSTNLSRVAG
                                                                                                                                                                                                                                                              185 VHFGEDGASYEAEIRELEALRQAMRTPSRNESGLELLTAYYNQLCFLDARFLTPARSLGL
                                                                                                                                                                                                                                                                                                                                    245 FFHWYDSLTGVP----AQQRAL-AFEKGSVLF------NIGALHTQIGA----R
                                                                                                                                                                                                                                                                                                                                                                                                                                         227 VEHAVAEGAKNVIRLISAAKAPDRKAVSEAQEKITESNQKIGLIRESLERRIGELPADHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            320 -----DMSAASLCALEQIMMAQAQECVFEGISPPASMAPQDCLAQIRLAQEAAQVAAE
                                                                                                                     69 QLHAVGCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSN-NRVRETVALEL
                                                                                                                                               18 QLGLAGADLAAPGVQQQLELERERLKREIKKELKUKEGAENLRRATTDLGRSLAPVELLL
                                                                                                                                                                                                                                                                                                                                                                       ---LODSKTKIDIIRMOLRRALQALQAGQLESQAAPDEAHGDPDLGAVELRIEELRHHFR
                                                                                                                                                                                                                                                                                                                                                                                                      284 QDRSCTEGAR-----ARAMEAFQRAAGAFSLLRENFSH-----APSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 373 YRLVHRIMAQPPVH---DYVPVSWTALVHVKAE--YFRSLAHYHVAMALCDGSPATEGEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        389 ENSTEVSTVLKLDNTVVGQTAWKPCGPNAWDQSFTLELERARE----LELAVFWRDQ--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   592 IPGSQAAAAGLKEGDYIVSVNGQPCRWWRHAEVVTELKAAGEAGASLQVVSLLPSSRLPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      526 IPNAVATGS-----FSPNASP-----GSEIRSTGD--ISMEKINLGADS--DS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        652 LGDRRPVLLGPRGLLRSQREHGCKT----PASTWASPRPLLNWSRKAQQGKTGGCPQPCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----KIFSKQQGQTFQRARHMNIDVATWVRLLR------RL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Rel. 42, Last sequence update)
(Rel. 43, Last annotation update)
scursor (Elastin microfibril interface-located protein 1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMILINI.
Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                            211;
                                                         DB 1; Length 946;
                                                                                            Indels
744 744 BY SIMILARITY.
946 AA; 104468 MW; FE9D4EFF8E5EEA4B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           565 SSQKSPAGLPSTSCSLSSPTHESTTSPELPSETQETPGPGL----
                                                 3.9%; Score 146.5; DB 1;
21.2%; Pred. No. 0.058;
ive 90; Mismatches 271;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1017 AA.
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                                                                                                                                                                                                                                                                                        21.2%;
                                                                                      Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    485 ERIPRLOROK---
                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PVKPAP 713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PLRKSP 613
                                                                                 Matches 154;
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15-MAR-2004
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ACT SITE
SEQUENCE
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                                                   Query Match
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M. WERL TRAIDS 10030;

R. MORRIET TRAIDS AND A. SERICA R. SIRIA! Adecti J., Bood H. Kondo S. P. RANGERGER FOOK N. A. SERICA R. SIRIA! H. Vannanka I. Kiyosawa, H. RANGERGER FOOK N. SERICA R. SIRIA! H. Wannanka I. Kiyosawa, H. RANGER A. SIRIA R. MARIAHA I. SERICA R. SIRIA! H. RASID D. P. SHICA R. SIRIA! H. RASID D. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON II. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON II. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I. S. GORDON I.
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635 GASLQVVSLLPSSRLPSLGDRRPVL----LGPRGLLRSQREHGCKTPASTWASPRPLLN 689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    127 LSYVNSNLQLL-----KEELEEL----SGGVDPGRHGSEAVTVPMIPLGLKETKELDW 175
                                                                                                     ---LTPARSL-----GLFFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQ 284
                                                                                                                                                                                                                                                                    416 NSTLGPSEEQEKNWPGGPGRLGHW---LPAAPGRLEKLE----GLLANVS---RELGGRM 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ----PTHEQ 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QLS-----QLEGLLQARGD-----EGCGACGGVQEELGRLRDGVERCSCP---- 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      433 VFLOPP-----TSSKPRGPVLPQELEERRQIGKAHLKRAILGQEEALRLHALCRVLR 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          --DGFSVFGGSSGSALQALQGELS 649
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ---IAAVIPGSQAAAAGLKEGDYIVSVNGQPCRWW---RHAEVVTELKAA------GEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      735 CERLDIVAGGLO----GLREG-----LSRHVAGLWAAVRESNSISLIOAALLEKLLGGQA
                                                                                                                                                                                -----AQAQECVFEGLSPPASMAPQDCLAQLRLAQEA-AQVAAEYRL-VHRTMA
                                                                                                                                                                                                                                                                                                                                                                                                       545 IFHRLGPL--SVFSAKNRWRLVGPVHLTRGEGGF----GLTLRGDSPVL-----
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Nagase T., Ishikawa K.-I., Nakajima D., Ohira M., Seki N.,
Miyajima N., Tanaka A., Kotani H., Nomura N., Ohara O.;
"Prediction of the coding sequences of unidentified human genes. VII."
                                   239 LSEIQQQLQLLDNRVSTHDQELGHLNNHHNGG--PGGGGRASGPVP-VPSGPSELLRQL
                                                                                                                                                                                                                                                                                                         DRSCTEGARRAMEAFQRAAGAFSLLRENFSHAPSPDMSAAS--LCALEQLMM------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            QPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDGSPATEGEL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10-0CT-2003 (Rel. 42, Last sequence update)
10-0CT-2003 (Rel. 42, Last sequence update)
Rho guanine nucleotide exchange factor 11 (PDZ-RhoGEF).
ARHGEF11 OR KIAA0380.
                                                                               STPLKELISVHF-GEDGASYEAE----IRELEALRQAM-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       690 WSRKAQQGKTGGCPQP-----CAPVKPAP 713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           842 -GKDGÓGGAIGP-PGPQGEQGAEGAPAAPVP 870
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                                                                                                                                                          ----RTPSRNESGLELL-
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nucleation of the triple helix and then a further quaternary assembly to higher order polymers via intermolecular disulfide bonds. Interacts with EMILIN2 (By similarity).

-!- SUBCELLULAR LOCATION: Extracellular matrix. Found mainly at the interface between amorphous elastin and microfibrils.

-!- DEVELOPMENTAL STAGE: Detectable in morula and blastocyst. First expressed in ectoplacental cone in embryos of 6.5 days and in extraembryonic visceral endoderm at 7.5 days. Expressed also in the allantois. Expression in the ectoplacental cone-derived secondary trophoblast giant cells and spongiotrophoblast is strong up to 11.5 days and then declines. In the embryo, high levels are initially expressed in blood vessels, perineural mesenchyme and somites at 8.5 days. Later on intense expression is identified in the mesenchymal component of organs anlage (ie lung and liver) arches). At late gestation expression is widely distributed in interstitial connective tissue and smooth muscle cell-rich
                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOSRRAQIHQQIDKELQMRTG-----AENLYRATS---NNR----VRETVALE 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----PVRVHVGPMNPQLHAVGCDSLTQIQCGQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfan; PF00386; C1q; 1.
Pfam; PF01391; Collagen; 1.
Cell adhesion; Extracellular matrix; Signal; Coiled coil; Collagen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 146; DB 1; Length 1017;
Pred. No. 0.069;
87; Mismatches 277; Indels 324;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (GLCNAC. . ) (FULLILL)
(GLCNAC. . ) (FOTENTIAL)
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(POTENTIAL).
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POLY-GLY.
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COLLED COLL (POTENTIAL)
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                                                                                                                                                                                                                                                                                                                                                   SIMILARITY: Contains 1 C1Q domain.
SIMILARITY: Contains 1 collagenous domain.
SIMILARITY: Contains 1 EMI domain.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR001073; C1q.
InterPro; IPR008160; Collagen.
InterPro; IPR008983; INF_like.
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Best Local Similarity 21.0
Matches 183; Conservative
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1017 AA;
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=20449035; PubMed=10900204;
Togashi H., Nagata K., Takagishi M., Saitoh N., Inagaki M.;
"Functions of a rho-specific guanine nucleotide exchange factor in neurite retraction. Possible role of a proline-rich motif of KIAA0380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUBUNIT: Interacts with GNA12 and GNA13 through the RGS domain. Interacts with RHOA, PLXNB1 AND PLXNB2. Interacts with SLC1A6 (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Structure of the RGS-like domain from PDZ-RhoGEF: linking heterotrimeric g protein-coupled signaling to Rho GTPases."; Structure 9:559-569(2001).
-!- FUNCTION: May play a role in the regulation of RhoA GTPase by guanine nucleotide-binding alpha-12 (GNA12) and alpha-13 (GNA13). Acts as guanine nucleotide exchange factor (GEF) for RhoA GTPase and may act as GTPase activating protein (GAP) for GNA12 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     similarity).
SUBCELLUIAR LOCATION: Cytoplasmic. Translocated to the membrane
                                                                                                                          Ruemenapp U., Blomquist A., Schwoerer G., Schablowski H., Psoma A.,
                                                                                                                                                             "Rho-specific binding and guanine nucleotide exchange catalysis by KIAA0380, a dbl family member."; FEBS Lett. 459:313-318(1999).
complete sequences of 100 new cDNA clones from brain which can
                                                                                                                                                                                                                                                                                        MEDINE=99150378; PubMed=10026210; Fukuhara S., Murga C., Zohar M., Igishi T., Gutkind J.S.; Fukuhara PDZ domain containing guanine nucleotide exchange factor links heterotrimeric G proteins to Rho."; J. Biol. Chem. 274:5868-5879(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                upon stimulation.
--- TISSUE SPECIFICITY: Ubiquitously expressed.
--- DOMAIN: The poly-Pro region is essential for plasma membrane localization upon stimulation.
--- SIMILARITY: Contains 1 DBL-homology (DH) domain.
--- SIMILARITY: Contains 1 PH domain.
--- SIMILARITY: Contains 1 PH domain.
--- SIMILARITY: Contains 1 RGSL (RGS-like) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Perrot V., Vazquez-Prado J., Gutkind J.S.; "Plexin B regulates Rho through the guanine nucleotide exchange factors leukemia-associated Rho GEF (LARG) and PDZ-RhoGEF."; J. Biol. Chem. 277:43115-43120(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=22259992; PubMed=12372594; Driessens M.H., Olivo C., Nagata K., Inagaki M., Collard J.G.; Bplexins activate Rho through PDZ-RhoGEF."; FEBS Lett. 529:168-172(2002)
                                                                                                                                                                                                                                                    INTERACTION WITH GNA12 AND GNA13, AND TISSUE SPECIFICITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=21364065; PubMed=11470431;
Longenecker K.L., Lewis M.E., Chikumi H., Gutkind J.S.,
Derewenda Z.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             X-RAY CRYSTALLOGRAPHY (2.2 ANGSTROMS) OF 281-490.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Biol. Chem. 275:29570-29578(2000)
                 code for large proteins in vitro.";
DNA Res. 4:141-150(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                           INTERACTION WITH PLXNB1 AND PLXNB2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INTERACTION WITH PLXNB1 AND PLXNB2.
MEDLINE=22301907; PubMed=12183458;
                                                                                INTERACTION WITH RHOA.
MEDLINE=99456836; PubMed=10526156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUBCELLULAR LOCATION.
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                                                                                                                                                                                                                                                                             TISSUE=Brain;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  627 ELKAAGEAGASLOVVSLLPSSRLPSLGDRRPVLLGPRGLLRSQREHGCKTPASTWASPRP 686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   567 VHLTRGEGGFGLTLRGDSPVLIAAVIPGSQAAAAGLKEGDYIVSVNGQPCRWWRHAEVVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "A defect in harmonin, a PDZ domain-containing protein expressed in the inner ear sensory hair cells, underlies Usher syndrome type 1C."; Nat. Genet. 26:51-55(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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OPESS4; OPIXI; O9CVG7; O9ESS5;
10-0CT-2003 (Rel. 42, created)
10-0CT-2003 (Rel. 42, Last sequence update)
10-0CT-2003 (Rel. 42, Last sequence update)
10-0CT-2003 (Rel. 42, Last annotation update)
Harmonin (Usher syndrome 1C protein homolog) (PDZ domain-containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Verpy E., Leibovici M., Zwaenepoel I., Liu X.-Z., Gal A., Salem N., Mansour A., Blanchard S., Kobayashi I., Keats B.J.B., Slim R., Petit C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Score 145.5; DB 1; Length 1522; Pred. No. 0.13; 16; Mismatches 56; Indels 37;
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734 923 DH.
965 1079 PM.-PRO.
1094 1099 POLY-PRO.
1522 Aa; 167703 MW; CA16E125B9FBA4AA CRC64;
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InterPro; IPR001478; PDZ_
InterPro; IPR001404; PDZ_
InterPro; IPR001404; PH.
InterPro; IPR001042; PH.
InterPro; IPR000219; RhGGEF.
Pfam; PF00521; RhGGEF; I.
Ffam; PF00521; RhGGEF; I.
SWART; SM00228; PDZ; I.
SWART; SM00218; PDZ; I.
SWART; SM00218; PDZ; I.
SWART; SM00218; PDZ; I.
PROSITE; PS50014; DH_1; FALSE_NEG.
PROSITE; PS50010; PH_2; I.
PROSITE; PS50010; PDZ; I.
PROSITE; PS50010; PDZ; I.
PROSITE; PS50010; PDZ; I.
PROSITE; PS50010; PDZ; I.
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TISSUE=Inner ear;
MEDLINE=20428180; PubMed=10973247;
                        EMBL; AB002378; BAA20834.1;
PDB; 1HTJ; 11-JUL-01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3.9%;
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                                                                                 Genew; HGNC:14580; ARHGEF11
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                                                                                                         605708;
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REQUENCE OF 740-852 FROM N.A. (ISOPORM 1).

RC STRAIN=CS7BL/6J; TISSUB=Small intestine;

RX MEDINE=2534683; PubMed=1246681;

RRDINE=2534683; PubMed=1246681;

RA NIKAIGO I., Osuruno M., Kasukawa T., Adachi J., Bono H., Kondo S.,

RA Nikaido I., Osuruno M., Kasukawa T., Adachi J., Schonbach C., Golobori T.,

RA Mikaido I., Dagami T., Matsuda H., Batalov S., Beisel K.W.,

RA Baldarelli R., Hill D.P., Bult C., Hume D.A., Conchenbach C., Golobori T.,

RA Blake J.A., Bradt D., Brusic V., Chothia C., Corbani L.B., Cousins S.,

RA Gaasterland T., Cariboldi M., Gissi C., Godzik A., Gough J.,

RA Gansterland T., Marchioni W., Lee Y., Lenhard B., Lyons B.A.,

RA Kanaj H., Kawaji H., Kawasawa Y., Kadzierski R.M., King B.L.,

RA Kanaja H., Kawaji H., Kawasawa Y., Kadzierski R.M., King B.L.,

RA Magoltt D.R., Maltais L., Marchionni L., McKenzie L., Miki H.,

RA Magashima T., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,

RA Ravasi T., Reed J.C., Reed D.J., Reid J., Rimgab B.Z., Ringwald M.,

RA Sandelin A., Schneider C., Semple C.A., Setcu M., Shimada K.,

RA Sandelin A., Schneider C., Semple C.A., Setcu M., Shimada K.,

RA Milming L.G., Wynshaw-Boris A., Yangisawa M., Yang I., Yang I.,

RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,

RA Hiraka A., Hashizume W., Imoteani A., Tich M., Kagawa I.,

RA Milmish L., Waki K., Kawai J., Aizawa K., Arakwa T., Fludka S.,

RA Hara A., Hashizume W., Imoteani K., Ishinagawa A.,

RA Hara A., Hashizume W., Imoteani K., Ishinagawa R.,

Randyasis of the mouse transcriptome based on functional annotation of

R. 6770 full Llengthe C.N.)
                                                                                                                                                                                      RESULE = 20.015.7; PubMed=12477932; Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Strausberg R.L., Feingold E.A., Grouse L.H., Schaefer C.F., Schuler G.D., Altschul S.F., Zeeberg B. Buecrow K.H., Schaefer C.F., Bhat N.K., Altschul S.F., Zeeberg B. Buecrow K.H., Schaefer C.F., Bhat N.K., Altschul S.F., Zeeberg B. Buecrow K.H., Schaefer C.F., Bhat N.K., Anterbrow M., Soares M.B., Bonaldo M.F., Casarint I.L., Scheetz T.E., Bronstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Frange C., Bronstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Brichards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Allakesley R.W., Touchman J.W., Green B.D., Dickson M.C., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.; "Generation and initial analysis of more than 15,000 full-length human
                                                            Verpy E., Leibovici M., Zwaenepoel I., Blanchard S., Petit C.; Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -!- SUBUNIT: Associates with USHIG/SANS (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                             SEQUENCE FROM N.A. (ISOFORM 1).
        [2]
SEQUENCE FROM N.A. (ISOFORM 2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nature 420:563-573(2002).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       653 -----SGKPSSSPTTERSFPPAPKTFC--PSPQPPRGP------GVSTI 688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  464 KRAILGQEE---ALRLHALCRVLREVDLLRAVISQTLQRSLAKYAELDREDDFCEAAEAP 520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              689 SKPVMVHQEHNFVXRPAVKSEVLPQEMLKRMVVYQTAFR------QDFRKYEEGF 737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ------PYSMFSPE---QIAGKDVRLLRIKKEGSLD 765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                578 LTLRG--DSP----VLIAAVIPGSQAAA-AGLKEGDYIVSVNGQPCRWWRHAEVVTELKAA 631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     345 LSPPASMAPODCLAQLRLAQEAAQVAAEYRLVHRTWAQPPVHDYVPV-SWTALVHVKAEY 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           521 DIQPKTHQKPEARMPRLSQGKGPDIFHRLGPLSVFSAKNRWRLVG-PVHLTR--GEGGFG 577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PDZ 3.
COLLED COLL (POTENTIAL).
COLLED COLL (POTENTIAL).
STEWEYRYBGKFPTIKKAK -> YDQGVEPADHLDGSTEE QRQ (in isoform 1).
/FTId=VSP 050330.
Missing (in isoform 1).
visible in skeletal muscle, liver, and lung and is absent from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               404 FRSLAHYHVAMALCDGSPATEGELPTHEQVFLQPPTSSKPRGPVLPQELEERRQLGKAHL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                605 IPPPPSIPTOD-LTPTRPLPSALEEALGN---HPFRTGDPGH---PADDWEANTH----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; Pred. No. 0.2;
33; Mismatches 124; Indels 140; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /FTId=VSP 050531.
SSLPSSAAES -> RKPPAGPKAA (in isoform
                                                                                                                                                                                                                                                                                                                                                                                                        HSSP; P29476; 1QAV.

MGD; MG1:1919338; Ushlc.
GG; GO:0005929; C:cilium; IDA.
GO; GO:0005515; F:protein binding; IPI.
GO; GO:0020515; F:protein binding; IPI.
InterPro; IPR002160; Kunitz_legume.
InterPro; IPR001478; PDZ.
                     brain. Isoforms 2 and 3 are expressed in the cochlea and vestibule.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3.7%; Score 138; DB 1; Length 910;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4).
SSL -> TFF (in isoform 1).
/FIId=VSP 050533.
/FIId=VSP 050533.
Missing (in isoform 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      375 375 E -> K (IN REF. 3).
740 740 Y -> H (IN REF. 4).
910 AA; 102284 MW; 427B97953BA5D941 CRC64;
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E -> K (IN REF. 3).
Y -> H (IN REF. 4).
                                                                  SIMILARITY: Contains 3 PDZ/DHR domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SMART; SMUULZO, 1..., PROSITE; PSS0106; PDZ; 3. Repeat; Coiled coil; Alternative splicing. DOMAIN 87 171 PDZ 1. PDZ 2.
                                                                                                                                                                                                                                                                                         Similarity 24.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96; Conservative
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SM00228; PDZ; 3.
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SMART; SM(
PROSITE; F
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DOMAIN
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ISOIG=098864-3; Sequence=VSP 050530, VSP 050531, VSP 050533; TISSUE SPECIFICITY: Isoform 1 is expressed in the eye, cochlea, vestibule, heart, kidney, small intestine and testis; it is barely

Isold=Q9ES64-2; Sequence=VSP_050532, VSP_050534;

Event=Alternative splicing; Named isoforms=3;

Name=3; Synonyms=b3; IsoId=Q9ES64-1; Sequence=Displayed; Comment=Additional isoforms exist;

Name=2; Synonyms=b2; Name=1; Synonyms=al;

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PROSITE; PS50132; R
Guanine-nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                          HUMAN
                                                                                                                              Query Match
                                                                                                    SEQUENCE
                                              DOMAIN
                                                                         DOMAIN
                                   DOMAIN
                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                               RESULT 14
EMI1_HUMAN
                                                                                                                                                     Matches
        SETTTES
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766 LALEGGVDSPVGKVVVSAVYEGGAAERHGGVVKGDEIMAING------KIVTDYTLA 816
                                629
                                                 817 - EAEAALQKAWNQGGDWIDLVVAVCPPKEYDDELSSLPSSAABSPQLARKQLBAYEPVCR 875
                            ------VVSLLPS----SRLPSLGDRRPVL------
                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-OCT-2003 (Rel. 42, Last sequence update)
10-OCT-2003 (Rel. 42, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Rho guanine nucleotide exchange factor 11 (RhoGEF glutamate transport
                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=21133160; PubMed=11242047;
Jackson M., Song W., Liu M.-Y., Jin L., Dykes-Hoberg M., Lin C.-L.G.,
Bowers W.J., Federoff H.J., Sternweis P.C., Rothstein J.D.;
"Modulation of the neuronal glutamate transporter EAAT4 by two
nature 410:89-93(2001).
                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A., FUNCTION, AND INTERACTION WITH RHOA; GNA13 AND SLCIA6.
                                                                               -----LGPRGLLRSQREHGCKTPASTWASPRP 686
                                                                                                       876 HGFFLQLEPTNLLLKSRERNOTDPSWRPASSAP 908
                                                                                                                                                                             PRT; 1527 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INTERPROJ 18P001431; GDS CDC24.
INTERPRO; IPR001431; GDS CDC24.
INTERPRO; IPR00149; PDZ.
INTERPRO; IPR001843; PH.
INTERPRO; IPR000219; RhGGEP.
FEAN; PP00525; PDZ; 1.
FEAN; PR00521; RhGGEF; 1.
SMART; SM00128; PDZ; 1.
SMART; SM00128; PDZ; 1.
SMART; SM00115; RGS; 1.
SMART; SM00115; RGS; 1.
PROSITE; PS00741; DH1; FALSE_NEG.
PROSITE; PS00701; DH2; 1.
PROSITE; PS00100; DH2; 1.
PROSITE; PS00100; PDZ; 1.
PROSITE; PS00100; PDZ; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AF225961; AAG28597.1; -.
                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                     Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                           modulator GTRAP48).
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                         632 GEAGASLQ-
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567 VHLTRGEGGFGLTLRGDSPVLIAAVIPGSQAAAAGLKEGDYIVSVNGQPCRWWRHAEVVT 626
                                                                                                                                                                                                                                                                                    627 BLKAAGEAGASLOVVSLLPSSRLPSLGDRRPVLLGPRGLLRSQREHGCKTPASTWASPRP 686
                                                                                                                                                                                                                                                                                                                                                                                 125 LIKSGAYA-----ALTLLGSS------PPSVGVSGLQQNPSVAGV-----LRVNP 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-22388257; PubMed=12477932; Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Strausberg R.L., Feingold E.A., Grouse L.H., Shemmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.L., Wang J., Hsieh F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   097672; 096658; 090676;
10-0077-2003 [Rel. 42, Created)
10-0077-2003 [Rel. 42, Last sequence update)
10-007-2003 (Rel. 42, Last sequence update)
EMILIN 1 precursor (Blasti amortation update)
(Elastin microfibril interfacer 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIANE_ZONE AND MAGED-10625608;
MEDIANE_ZONESSON B., PubMed-10625608;
Doliana R., Canton A., Bucciotti F., Mongiat M., Bonaldo P.,
Colombatti A.; Catron B., Bucciotti F., Mongiat M., Bonaldo P.,
"Structure, chromosomal localization, and promoter analysis of the human elastin microfibril interface located protein (EMILIN) gene.";
                       factor; GTPase activation; Coiled coil.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-99287867; PubMed=10358019; MEDLINE-99287867; PubMed=10358019; Dollana R., Mongiat M., Bucciotti F., Giacomello E., Deutzmann R., Volpin D., Bressan G.M., Colombatti A.; "EMILIN, a component of the elastic fiber and a new member of the Clq/tumor necrosis factor superfamily of proteins."; J. Biol. Chem. 274:16773-16781(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                           35;
                                                                                                                                                                               ^ Match 3.6%; Score 136.5; DB 1; Length 1527; Local Similarity 29.2%; Pred. No. 0.51; les 45; Conservative 18; Mismatches 56; Indels 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUB=Uterus;
Ottenwaelder B., Obermaler B., Mewes H.-W., Gassenhuber J.,
                                 64 143 PUZ.

323 503 RGSL.

461 487 COLLED COIL (POTENTIAL).

472 931 DH.

973 1087 PH.

1527 AA; 168533 MW; ABAEA20F541A3A9A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wiemann S.;
Submitted (MAY-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     687 LLNWSRKAQQGKTGGCPQPCAPVKPAPPSSLKHP 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT; 1016 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Biol. Chem. 275:785-792(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 434-1016 FROM N.A.
RGS; 1.
e releasing
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
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new component of the

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superfamily...

1. Sipol. Chem. 276:12011(2001).

2. FUNCTION: May be responsible for anchoring smooth muscle cells to elastic fibers, and may be involved not only in the formation of the elastic fiber, but also in the processes that regulate vessel assembly. Has cell adhesive capacity.

2. SUBMIT: Homotrimer associated through a moderately stable interaction of the C-terminal globular Old domains, allowing the nucleation of the triple helix and then a further quaternary assembly to higher order polymers via intermolecular disulfide bonds. Interacts with EMILIN2.

2. SUBCELLULAR LOCATION: Extracellular matrix. Found mainly at the interface between amorphous elastin and microfibrils.

2. TISSUE SPECIFICITY: Distributed in tissues where respliance and content of the real content of the respliance and content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the real content of the r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             elastic recoil are preminent. Highest levels in the adult small intestine, aorta, lung, uterus, and appendix and in the fetal spleen, kidney, lung, and heart; intermediate expression was detected in adult liver, ovary, colon, stomach, lymph node and spleen; adult heart, bladder, prostate, adrenal gland, mammary gland, placenta and kidney showed low expression whereas a series of other adult tissues, including skeletal muscle and different regions of adult brain show no expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MISCELLANBOUS: Its deposition precedes the appearance of elastin and is simultaneous with that of fibrillin 1.
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-!- SIMILARITY: Contains 1 collagenous domain.
-!- SIMILARITY: Contains 1 EMI domain.
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PIR; T08772; T08772.
Genew; HGNC:19880; EMILIN1.
MIM; 130660; --
GO; GO:0000515; F:protein binding; IPI.
GO; GO:00007155; P:cell adhesion; TAS.
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InterPro; IPR008160; Collagen.
InterPro; IPR008577; FGGY kin.
InterPro; IPR008983; INF_Iike.
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Pfam; PF00386; Clq; 1. Pfam; PF00386; Clq; 1. Pfam; PF00386; Collagen; 1. Pfam; PF00391; Collagen; 1. Pfam; Pfam; Extracellular matrix; Signal; Coiled coil; Collagen; Glycoprotein.

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680 ATKDRIISEINRLQQEATEHATESEERFRGLEEGQAQAGQCPSLEGRLGRLEGVCERLDT 739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----TSSKPRGPVLPQELEERRQLGKAHLKRAILGQEEALRLHALCRVLREVDLLR 490
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                287 SCTEGARRAMEAFQRAAGAFSLLRENFSHAPSPDMSAAS--LCALEQLMMAQAQECVFEG 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               345 LSPPASMAPQDCLAQLRL-----AQEAAQVAAB--YRLVHRTMAQPPVHDYVPVS 392
                                                                                                                                                                                                                                                                                                                         -----AENLYRATS---NNR-----VRETVALE 126
                                                                                                                                                                                                                                                                                                                                                                                   178 VQQLEEQV-QSLTKELQGLRGVLQGLSGRLAEDVQRAVETAFNGRQQPADAAARPGVHET 236
                                                                                                                                                                                                                                                                                                                                                                                                            LSYVNSNLQLL-----KEELEELSG--GVDPGRHGSEAVTVPMIPLGLKETKELDWST 177
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              PLKELISVHF-GEDG------ 213
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(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
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                                                                                                                     (POTENTIAL)
                                                                                                                                                                                                                                                            Length 1016;
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W; 6CF330238DD0EE26 CRC64;
                                   COLLED COIL (POTENTIAL).
COLLED COIL (POTENTIAL).
COLLED COIL (POTENTIAL).
COLLED COIL (POTENTIAL).
COLLAGEN.
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                                                                                                                                                           (GLCNAC. . .)
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21.2%; Pred. No. 0.34;
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POTENTIAL.
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           EMILIN 1.
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655 SSLNDSLN------
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591 VIPGSQAAAAGLKEGDYIVSVNGQPCRWW---RHAEVVTELKAA-----GEAGASLQV 640
                      641 VSLLPSSRLPSLGDR-----RPVLLGPRGLLRSQREHGCKTPASTWASPRPLLNWSRKAQ 695
                                                                                                      791 GAL--NSSLQLLEDRIHOLSLKDLTGPAG-----EAGPPGPPGPPGLQGPPGPPGSPGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=97349984; PubMed=9205841;
Nagasea T., Ishikawa K.-I., Nakajima D., Ohira M., Seki N.,
Mayasea T., Tanaka A., Kotani H., Momura N., Ohara O.;
"Prediction of the coding sequences of unidentified human genes. VII.
The complete sequences of 100 new cDNA clones from brain which can code for large proteins in vitro.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. (ISOFORMS 1 AND 2), AND CHROMOSOMAL TRANSLOCATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=21581903; PubMed=11724822;
Taya S., Inagaki N., Sengiku H., Makino H., Iwamatsu A., Urakawa I., Nagao K., Kataoka S., Kaibuchi K.;
"Direct interaction of insulin-like growth factor-1 receptor with leukemia-associated RhoGEF.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-Prostate;
MEDLINE-20160919; PubMed=10681437;
Kourlas P.J., Strout M.P., Becknell B., Veronese M.L., Croce C.M., Theil K.S., Krahe R., Ruutu T., Knuutila S., Bloomfield C.D., Caligiuri M.A.;
"Identification of a gene at 11q23 encoding a guanine nucleotide exchange factor: Evidence for its fusion with MLL in acute myeloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINB=20547532; PubMed=11094164;
Vickhara 8., Chikumi H., Gutkind J.S.;
"Leukemia-associated Rho guanine nucleotide exchange factor (LARG)
links heterotrimeric G proteins of the G(12) family to Rho.";
FEBS Lett. 485:183-188(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo
                                                                                                                                                                                                                                                                                 Q9NZNJ; 015086;
10-OCT-2003 (Rel. 42, Created)
10-OCT-2003 (Rel. 42, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Rho guanine nucleotide exchange factor 12 (Leukemia-associated)
RhoGEF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Inagaki M., Collard J.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FUNCTION, AND INTERACTION WITH RHOA; GNA12 AND GNA13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Proc. Natl. Acad. Sci. U.S.A. 97:2145-2150(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=22259992; PubMed=12372594;
Driessens M.H., Olivo C., Nagata K., Inagaki M
"B plexins activate Rho through PDZ-RhoGEF.";
                                                                                                                                                                                                                                                                        PRT; 1544 AA.
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MEDLINE=22301907; PubMed=12183458;
Perrot V., Vazquez-Prado J., Gutkind J.S.;
                                                                                                                                           696 QGKTG--GCPQP-----CAPVKPAP 713
                                                                                                                                                                              843 DGQEGPIGPPGPQGEQGVEGAPAAPVP 869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INTERACTION WITH PLXNB1 AND PLXNB2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cell Biol. 155:809-820(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 795-1544 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                  KNOGEF).
ARHGEF12 OR LARG OR KIAA0382.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEBS Lett. 529:168-172(2002).
                                                                                                                                                                                                                                                                        STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                 (Human)
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3;
                                                                                                                                                                                                                                                                                                                                                        -!- DISEASE: Involved in acute leukemia by a chromosomal translocation t(11:11) (q23;23) that involves MLL and ARHGEF12.
-!- SIMILARITY: Contains 1 DBL-bhomology (DH) domain.
-!- SIMILARITY: Contains 1 PDZ/DHR domain.
-!- SIMILARITY: Contains 1 PH domain.
-!- SIMILARITY: Contains 1 PH domain.
                                                                                                                                                                                                                                                                                                          IsoId=Q9NZN5-2; Sequence=VSP 008131;
TISSUE SPECIFICITY: Ubiquitously expressed. Isoform 2 is found in
"Plexin B regulates Rho through the guanine nucleotide exchange factors leukemia-associated Rho GEF (LARG) and PDZ-RhoGEF.";
J. Blol. Chem. 277:43115-43120(2002).
-!- FUNCTION: May play a role in the regulation of RhoA GTPase by guanine nucleotide-binding alpha-12 (GNA12) and alpha-13 (GNA13). Acts as guanine nucleotide exchange factor (GEF) for RhoA GTPase and may act as GTPase activating protein (GAP) for GNA12 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BREAKPOINT FOR TRANSLOCATION TO FORM MLL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IRR000342; Regl Gprotein.
InterPro; IRR000342; Regl Gprotein.
InterPro; IRR000219; RhoGEF.
Ffam; PR00621; RhoGEF; 1.
SWART; SW00228; PDZ; 1.
SWART; SW00323; PH; 1.
SWART; SW00323; PH; 1.
SWART; SW00325; RhoGEF; 1.
PROSITE; PS50010; DH 2; 1.
PROSITE; PS50010; DH 2; 1.
PROSITE; PS50003; PH DOMAIN; 1.
Guanine-nucleotide releasing factor; GTPase activation; Coiled coil; Procarcogene; Chromosomal translocation; Alternative splicing.
                                                                                                                                  SUBUNIT: Interacts with GNA12 and GNA13, probably through the RG like domain. Interacts with RHOA, PLXNB1 AND PLXNB2. Interacts through its PDZ domain with IGF1R beta subunit. SUBCELLULAR LOCATION: Cytoplasmic. Translocated to the membrane upon stimulation (Probable).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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/FIId=VSP 008131.
Y -> F (IN REF. 2).
W; 0B7E319CF7C7A224 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COILED COIL (POTENTIAL)
                                                                                                                                                                                                                                           Event=Alternative splicing; Named isoforms=2;
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                                                                                                                                                                                                                                                                          IsoId=Q9NZN5-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     or send an email to license@isb-sib.ch).
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InterPro; IPR001478; PDZ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; AF180681; AAF36817.1; -. EMBL; AB002380; BAA20836.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HSSP, Q12923; 3PDZ.
Genew, HGNC:14193; ARHGEF12.
MIM; 604763; -.
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les 36; Conserv
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Search completed: July 13, 2004, 12:05:10 Job time : 28 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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OM protein - protein search, using sw model

Run on:

July 13, 2004, 11:29:06; Search time 34 Seconds (without alignments) 2045.485 Million cell updates/sec

US-10-697-266-2 3774 I MILEERPDGAGAGEESPRLQ......QPCAPVKPAPPSSLKHPGWP 723 Title: Perfect score:

Scoring table: Sequence:

283366 seqs, 96191526 residues BLOSUM62 Gapop 10.0 , Gapext 0.5

Searched:

283366 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

PIR 78:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Description		hypothetical prote	probable signal tr	hypothetical prote	hypothetical prote	BRO1 protein - vea	hetical	. £0	protein co-factor	=	probable transcrip	protein kinase (EC	a:	cal pro	probable quanine n	vrosine	G-protein signalin		probable smc prote	plectin [imported]	hypothetical prote	plectin - human	1	-t	cytoplasmic linker	I-kappa-B-related	hypothetical profe	c-di-GMP phosphodi	polyketide synthas	man	
SUMMARIES	1 1	586285	T37837	S41034	S67177	S61104	T31555	JC2129	146532	A54602	T34847	JC2130	G01158	T08772	T09144	T14355	JC5502	G81186	B70748	A59404	T00257	G02520	A39638	S71625	T42734	A56429	S62460	F75372	T30225	ın	
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esult No.	1	4 (7	m	4	Ŋ	9	7	80	Q	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	29	

laminin alpha-4 ch	dsRNA-binding prot	synaptic scaffoldi	hypothetical prote	nonstructural prot	hypothetical prote	cytoplasmic linker	protein kinase (EC	hypothetical prote	mismatch DNA recod	gene LLS protein -	actin binding prot	actin binding prot	pericentrin - mous	actin binding prot	centrosome associa
368960	151653	T14152	G81915	S38480	AH1722	T42720	JC7083	T14765	862790	837032	T42725	T30847	A53188	T30849	T08621
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1816	800	1277	1161	2115	908	1046	889	723	818	781	1825	1885	1920	2033	2442
3.2	3.2	3.2	3.2	3.2	3.2	3.5	3.2	3.2	3.2	3.2	3.2	3.2	3.5	3.2	3.2
10	122	121.5	121	121	20.5	120.5	120	119.5	19.5	119	119	119	119	119	119
122.5		17			H	٦		Н	М						

ALIGNMENTS

RESULT 1

palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso, nn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.; Zar, L. kins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C. X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, Y. D.; Sakano, H. ser, C.M.; Venter, J.C.; Davis, R.W. is of chromosome 1 of the plant Arabidopsis.	Clacession: B66285 R;Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso, Chin, C.M.; Chun, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.; Nature 408, 816-820, 200 A;Authors: Hunter, J.D.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C.C. C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, Rizzo, M.; Rooney, T.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, I A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, I A;Reference and analysis of chromosome 1 of the plant Arabidopsis. A;Reference number: A86141; MUID:21016719; PMID:11130712	'Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso, and, L.; Conway, A.B.; Creasy, T.H.; Dewar, K.; Zar, L. Zar, L. Zar, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, B.; Kim, C.; Ki.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, Y. D.; Sakano, H. Shwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, I ser, C.M.; Venter, J.C.; Davis, R.W. Is of chromosome 1 of the plant Arabidopsis.
; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alons nan, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K art, L.; Conway, A.B.; Creasy, T.H.; Dewar, K kins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marzial Y, D.; Sakano, H.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon ser, C.M.; Venter, J.C.; Davis, R.W. ser, C.M.; Venter, J.C.; Davis, R.W. wurd: 20 for the plant Arabidopsis.	; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alons nn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K zar, L. Kins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marzial y, D.; Sakano, H.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon ser, C.M.; Venter, J.C.; Davis, R.W. is of chromosome 1 of the plant Arabidopsis.	; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alons nn, L.; Conway, A.B.; Creasy, T.H.; Dewar, K. S., L.; Conway, A.B.; Creasy, T.H.; Dewar, K. S., L.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marzial, Y. D.; Sakano, H. Shinn, P.; Southwick, A.M.; Sun, H.; Tallon Sar, C.M.; Venter, J.C.; Davis, R.W. is of chromosome 1 of C.; Davis, R.W. is of chromosome 1 of the plant Arabidopsis.
<pre>kins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C. X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, y, D.; Sakano, H. Schwartz, J.K.; Shim, P.; Southwick, A.M.; Sun, H.; Tallon, ser, C.M.; Venter, J.C.; Davis, R.W. is of chromosome 1 of the plant Arabidopsis. dwurb:21016719; PMID:11130712</pre>	<pre>zar, L. kins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C., X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, y, D.; Sakano, H. chwartz, J.R.; Shim, P.; Southwick, A.M.; Sun, H.; Tallon, iser, C.M.; Venter, J.C.; Davis, R.W. is of chromosome 1 of the plant Arabidopsis. MuID:21016719; PMID:11130712</pre>	zar, L. Kins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C., X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Malti, R.; Marziali, y, D.; Sakano, H. chwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, ser, C.M.; Venter, J.C.; Davis, R.W. is of chronsome I of the plant Arabidopsis. WUID:21016719; PMID:11130712
Kins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C. X.; Liu, S.X; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, Y. D.; Sarano, H. Chwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, ser, C.M.; Venter, J.C.; Davis, R.W. is of chromosome 1 of the plant Arabidopsis.	Kins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C., X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, y, D.; Sakano, H.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, 1 ser, C.M.; Venter, J.C.; Davis, R.W. is of chromosome 1 of the plant Arabidopsis. MuID:21016719; PMID:11130712	kins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C., X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, Y., D.; Sarano, H. chwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, 1 ser, C.M.; Venter, J.C.; Davis, R.W. is of chromosome 1 of the plant Arabidopsis.
<pre>y, D.; Sakano, H. chwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, ser, C.M.; Venter, J.C.; Davis, R.W. is of chromosome 1 of the plant Arabidopsis. MUID:21016719; PMD:11130712</pre>	<pre>y, D.; Sakano, H. chwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, I ser, C.M.; Venter, J.C.; Davis, R.W. is of chromosome 1 of the plant Arabidopsis. MUID:21016719; PMID:11130712</pre>	<pre>y, D.; Sakano, H. chwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, I chwartz, J.R.; Shinn, P.; Javis, R.W. ser, C.M.; Venter, J.C.; Davis, R.W. is of chromosome 1 of the plant Arabidopsis. wUID:21016719; PMID:11130712</pre>
ser, C.M.; Venter, J.C.; Davis, R.W. Is of chromosome 1 of the plant Arabidopsis. WID:21016719; PMID:11130712	ser, C.M.; Venter, J.C.; Davis, R.W. is of chromosome 1 of the plant Arabidopsis. WUID:21016719; PMID:11130712	ser, C.M.; Venter, J.C.; Davis, R.W. is of chromosome 1 of the plant Arabidopsis. MUID:21016719; PMID:11130712
s of chromosome 1 of the plant Arabidopsis. NID:21016719; PMID:11130712	s of chromosome 1 of the plant Arabidopsis. MID:21016719; PMID:11130712	s of Chromosome 1 of the plant Arabidopsis. MID:21016719; PMID:11130712
A;NOCECUS: PIEITMILIARY A;MOLE type: DNA A;Residues: 1-816 < CRIO> A;Cross-references: GB:AE005172; NID:g5103812; PIDN:AAD39642.1; GSPDB:GN00141	172; NID:95103812; PIDN:AAD39642.1; GSPDB:GN00141	172; NID:95103812; PIDN:AAD39642.1; GSPDB:GN00141

A; Map position: 1

24; 7.7%; Score 289; DB 2; Length 816; 23.3%; Pred. No. 4.9e-12; tive 88; Mismatches 182; Indels 192; Gaps Query Match Best Local Similarity 23.33 Matches 140; Conservative

155 SEAVIVPMIPLGLKETKELDWSTPLKELISVHFGEDGASYEAEI--RELEALRQAMRIPS 212 57 ò d

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263 AFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMBAFQRAAGAFSLLRENFS-----HA 316 à g

317 PSPDMSAASLCALEQLMMAQAQECVFE----GLSPPASMAPQDCLAQLRLAQEAAQVAA 371 à

431 372 EYRLVHRIMAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDGSPATEGELPTHE 엄 ઠે

242 222 0-----DP $\dot{\delta}$

g

Qy 542GPDIFHRLGPLSVFSARN 559 	RESULT 3 \$41034 hypothetical protein R10E12.1 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 09-Sep-1997 C;Accession: \$41034 R;Smith, A. submitted to the EMBL Data Library, January 1994 A;Reference number: \$41034 A;Reference number: \$41034 A;Reference number: \$41034 A;Retus: preliminary A;Molecule type: DNA A;Residues: 1-882 <smi>A;Residues: 1-882 <smi>A;Cross-references: EMBL:Z29561; NID:g450897; PID:g450898 C;Genetics: A;Introns: 72/2; 324/3; 359/1; 400/2; 722/1; 743/1; 782/1; 818/1</smi></smi>	Query Match Match Attended Similarity 22.84; Score 284.5; DB 2; Length 882; Best Local Similarity 22.84; Score 284.5; DB 2; Length 882; Best Local Similarity 22.84; Score 284.5; DB 2; Length 882; Best Local Similarity 22.84; Store 209; Indels 139; Gaps 22; Best Local Similarity 22.84; Store 209; Midels 139; Gaps 22; Best Local Similarity 22.84; Store 200; Indels 139; Gaps 22; Best Local Similarity 22.84; Store 200; Indels 139; Gaps 22; Best Local Similarity 22.84; Store 200; Indels 139; Gaps 22; Midels 130; Store 200; Store 2	C;Species: Saccharomyces cerevisiae C;Date: 12-Jul-1996 #sequence_revision 12-Jul-1996 #text_change 19-Apr-2002
QY 492 VISQTLQRSLAKYAELDREDDFCEAARAPDIQPKTHQKPEARMPRLSQGKGPDIF 546	Qy 547 HRLGPLSVFSAKURWRLVGPVHLTRGEGGFGLTLRG-DSPVLIAAVI 592 Db 337 SILVPDSSAKALSRYTEWVDDVIRTQAERLQQASELTRVRLKEMDLPDSILAV- 389 Qy 593 PGSQAAAAGLKEGDYIVSVNGQPC	### 1927 1.	Db 309 STFIKSSLSHLLKTAEKDNDFVFHDLVVKEVELPKISP-LQALPPLPLEKLYGSQDGFET 367

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submitted to the EMBL Data Library, September 1995
A;Description: BRO1, a novel gene that interacts with components of the PKC1-MAP kinase J
A;Reference number: S61940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Gene: CESP:YS3HIC.2
A;Introns: 35/3; 78/2; 125/3; 172/3; 224/3; 234/2; 477/1; 527/1; 630/1; 1205/3; 1268/1; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            330 EQLMMAQAQEC-VFEGLSPPASMAPQDCLAQLRLAQEAAQVAAEYRLVHRTMAQPPVHDY 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            344 --GLSPPASMAPQDCLAQIRLAQEAAQVAAEYRLVHRTWAQPPVHDYVPVSWTALVHVKA 401
                                                                                                                              A,Molecule type: DNA
A,Rosaidues: 1-358,'Y',360-844 <NIC>
A,Cross-references: EMBL:U37364; NID:g1098952; PIDN:AAB07790.1; PID:g1098953
C,Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Species: Caenorhabditis elegans
Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 29-Oct-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65 EQNLK----YYSFLEHLYFRIGSRGSRLKMDFTWYDABYSSAQKGLKYTQHTLAFEKSCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   162 MIPLGLKETKELDWSTPLKELISVHFGED--GASY-EAEIRELEALRQ----AMRTPSRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      215 ESGLELLTAYYNQLCFLDARFLTPARSLGLFFHWYD-----SLTGVPAQQRALAFEKGSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     270 LFNIGALHTQIGARQDRSCTEGARRAMEAFQRAAGAFSLLRENFSHAPSPDMSAASLCAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5 LFDLKLKDTEKLDWKKGLSSYLKKSYGSSQWRTFYDEKATSELDHLRNNANGELAPSSLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 || || || :| : ::|:|||||||| :
153 FYPSVDLDANVISFYYKVMIAQAQECLVQKSLLDNRSAIVIAKLSLWLQEAYDSAAKIVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           204 LRQAMRIPSRNESGLELLIAYYNQLCFLDARF-LIPARSLGLFFHWYDSLIGVPAQQRA-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          262 ----LAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQRAAGAFSLL---RENFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MKEEANVPTPSVEQTLKLKRYYGQLCMMQKRFPMGAGEQLETPFAWHDGLIDIRSAQSEV
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                                                                                                                                                                                                                                                                                                                                                                                                                                   32;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A)Residues: 1-1400 <WIL>
A)Cross-references: EMBL:AL117201; PIDN:CAB55064.1; CESP:Y53HIC.2
                                                                                                                                                                                                                                                                                                                                                                         Length 844;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hypothetical protein Y53H1C.2 - Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                Query Match
5.4%; Score 202; DB 2; I
Best Local Similarity 28.4%; Pred. No. 5.8e-06;
Matches 76; Conservative 43; Mismatches 117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ouery Match 5.2%; Score 197.5; DB 2; Best Local Similarity 22.3%; Pred. No. 2.4e-05; Matches 110; Conservative 75; Mismatches 186;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   submitted to the EMBL Data Library, October 1999 A; Reference number: Z21044 A; Accession: T31555 A; Accession: T31555 A; Status: preliminary; translated from GB/EMBL/DDBJ A; Molecule type: DNA
                                                                                                                                                                                                                                                 A;Gene: SGD:BRO1
A;Cross-references: SGD:S0006005; MIPS:YPL084w
A;Map position: 16L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         231 VAIYGEPKWKTTVTCKLHFYKSLSAYYH 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       389 VPV----SWIALVHVKAEYFRSL-AHYH 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          315 HAPSPDMSAASLCALEQLMMAQAQECVFE---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Experimental source: clone Y53H1C
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                                                                                                                                          A Molecule type: DNA
A; Residues: 1-661 < CHE>
A; Residues: 1-661 < CHE>
A; Residues: 1-661 < CHE>
A; Residues: 1-661 < CHE>
A; Cross-references: EMBI: 275183; NID: 91420615; PID: e252121; PID: 91420616; MIPS: YOR275c
A; Experimental source: strain 5288C
B; Cheret, G; Bernardi, A.; Sor, F.
Yeast 12, 1059-1064, 1996
A; Title: DNA sequence analysis of the VPH1-SNF2 region on chromosome XV of Saccharomyces
A; Reference number: S72039; MUID: 97051594; PMID: 8896271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Accession: S61104
A;Molecule type: DNA
A;Residues: 1-844 <HAL>
A;Cross-references: EMBL:U41849; NID:g1147608; PIDN:AAB68255.1; PID:g1147610; MIPS:YPL08
R;Nickas, M.E.; Yaffe, M.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Σ
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N;Alternate names: protein LPF2w; protein YPL084w
C;Species: Saccharomyces cerevisiae
C;Species: Saccharomyces cerevisiae
C;Date: 23-Feb-1996 #sequence_revision 01-Mar-1996 #text_change 29-Oct-1999
C;Accession: S61104; S61940
C;Accession: S61104; S61940
S;Hall, J.; Ahmed, A.; Bussey, H.; Fortin, N.; Friesen, J.D.; Storms, R.K.; Vo, D.H.; Vsubmitted to the EMBL Data Library, August 1995
A;Bescription: The sequence of Saccharomyces cerevisiae chromosome XVI left arm.
A;Reference number: S59677
                                                                                                                                                                                                                                                                                                                                                                            A Accession: $72046
A Status: mucleic acid sequence not shown; translation not shown
A, Molecule type: DNA
A, Residues: 1-661 < CHW>
A; Residues: 1-661 < CHW>
A; Cross-references: EMBL: X89633; NID:g1279694; PIDN:CAA61781.1; PID:g1279701
A; Onte: the nucleotide sequence was submitted to the EMBL Data Library, June 1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        215 ESGLELLTAYYNQLCFLDARFLTPARSLGLFFHWYDSLT--GVPAQQRALAFEKGSVLFN 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             57 IDGLSALKEYYVILLQLEKKF--PINQIE--FTWFQTLSQKSRGTSQYSLQWEKLTIIYN 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            387
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     388 -YVPVSWTALVHVKAEYFRSLAHYHVAMALCDGSPATEGELPTHEQVFLQPPTSSKPRGP 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          447 VLPQELBERRQLGKAHLKRAILGQEEALRLHALCRVLREVDLLRAVISQTLQRSLAKYAE 506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----LQFINESTLSSQAKFKTVVESSLKEAQ 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 SELLAIP-----LKRTLEVDFATELSKLIDITSFQTASFFQSDILKVVDARNNAIAPDIS 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              332 IMMAQAQECVFEGLSPPASMAPQDCLAQLRLAQEAAQVAAEYRLVHRTMAQPPVHD----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                291 RDNEFIYLOEVPSELPSÍKPALMVKPSSSATLLPSÍKKDETLFKDLIPIEV 341
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 6.1%; Score 212; DB 2; Length 661; Best Local Similarity 22.6%; Pred. No. 3.4e-08; Matches 93; Conservative 73; Mismatches 163; Indels
C,Accession: S67177, S72046
R;Cheret, G.; Sor, F.
submitted to the Protein Sequence Database, July 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              218 KLIRSDWINHLKAKKAYFSAVTYYRIALS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                247 ----FNEKKÖFGNV-VKALOMG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cross-references: SGD:S0005801
                                                                                          A;Reference number: S67169
A;Accession: S67177
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A; Note: YOR275c
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protein kinase A regulatio
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C; Species: Oryctolagus cuniculus (domestic rabbit)
C; Species: Oryctolagus cuniculus (domestic rabbit)
C; Species: Oryctolagus cuniculus (domestic rabbit)
C; Species: Oryctolagus cuniculus (domestic rabbit)
C; Accession: 146532
R; Weinman, E.J.; Steplock, D.; Wang, Y.; Shenolikar, S.
J. Cilin Invest. 95, 2143-2149, 1995
A; Title: Characterization of a protein cofactor that mediates protein kinase A rA; Reference number: 146532
A; Roccession: 146532
A; Accession: 146532
A; Accession: 146532
A; Mull: 95256437; PMID: 7738182
A; Accession: 146532
A; Manaleule type: mRNA
A; Residues: 1-358 «WEXA
A; Residues: 1-358 «WEXA
A; Residues: 1-358 «WEXA
A; Cross-references: EWBL: U19815; NID: 9687674; PIDN: AAA80218.1; PID: 9687675
C; Superfamily: GLGF domain homology «GLG2»
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128 SYVNSNLOLLKEELEELSGGV---DP-GRHGSEAVTVPMIPLGLKETKELDWSTPLKELI 183
                                                                                                                                         ---GAGGPICSATNLSRVAGLEKQLAIELKVKQGAENMIQTYSNGSTKDRKLLLTAQQM 169
                                                                                                                                                                                                                                                                                                                                                                   | : : |||: : ||| : RVEHAVAEGAKNVLRL------LSAAKAPDRKAVSEAQEKLTESNQKLGLLR 268
                                                                                                                                                                                                                                                                                                                                                                                                                              EGLSPPASMAPODCLAQLRLAQEAAQVAAEYRLVHRTMAQPPVHDY----VPVSWTALVH 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BALERRIGELPAD-HPKGRLLREELAAASSAAFSTRLAGPFPATHYSTLCKPAPLIGTLE 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----TSSKPRGP----VLPQELEERRQLGKAHLKRAILGQ 470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  382 KAEAENTSEVSTVLKLDNTVVGQTSWKPCGPNAWDQSFTLELERARE-----LELAVFWR 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BEALRIHALC -- RVLREVDILRAVISQTLQRSLAKYABLDREDDFCEAABAPDIQPKTHQ 528
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                                                                                                                                                                                                                                                                                                                      RODRSCTEGARRAMEAFORAAGAFSLLRENFSHAPSPDMSAASLCALEQLMMAQAQECVF
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                                                                                                       SVHFGEDGASYEA-EIRELEALRQAMRTPSRNESGLELLTAYYNQLCFLDARFLTPARSL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  529 KPE-ARMPRL-----SQGKGPDIFHRLGPLSVFSAKNRWRLVGPVHLTR-----
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                                                  RGSSRRLDLLHQQLQELHAHVVLPDPAATHDG----PQSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      557 TDSDSŠPOKSSRDPPSSPSŠLSS--PI--
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----CSPLRKSP 609
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Best Local Similarity 24.03
Matches 89; Conservative
                                                                                                                                                                                                                       243 GLFFHWYDSLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        419 GSPATEG---
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B.Species: Homo sapiens
C.Species: Homo sapiens

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                                                                                      E----YFRSLAHYHVAMALCDGSPATEGELPTHEQVFLQPPTSSKPRGPVLPQELEER
                                                                                                                                                                                              456 ROLGKAHLKRAILGQEEALRLHALCRVLREVDLLRAVISQTLQRSLAKYAELDREDDFCE
                                                                                                                                                                                                                                                                                                      516 AAEA---PDIQPKTHQK--PEARMPRLSQGKGPDIFHRLGPLSVFSAKNRWRLVGPVHLT
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N;Alternate names: protein-kinase-C-related kinase PRK1
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        EWSVNIPESVQRRTIAIKLDLKQRNAEKENDF-
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444 AIAQHSANLQLLTL 457
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Db 916 LERQLKLDEEPPGGSSRCCPALETRGRGTPQLAEEATAKAISDLAVRRARHRLLSGDSIE 975 Qy 481 -RVLREVDLRAVISQTLQRSLAKYAELDREDDFCEAAEAPDIQPKTHQKPEAR 533	666 PLINWSRKAQGKTG-GCPQPCAPVRP-APPSSLK 718	Query Match
Db 45 GSPAEKAGLLAGDRLVEVNGENVEKETHQQVVSRIRAALNAVRLLVVDPDTDEQ 98 QY 455 RRQLGKAHLKRAILGGEEALRLHALCRVLREVDLLRAVISQTLQRSLAKYAELDRED 511 Db	Oy 663 RGLLRSQREHGCKTPASTWASPRPLLNWGRK 693 Db 275 AASESPRPALARSASSDTSEELASQDSPKKEDSTAPSSTSSSSDPILDFSISLAVAKERA 334 Oy 694 AQQGKTGGCPQ 704 Db 335 HQKRSSRRAPQ 345 RESULT 9 A54602 microtubule-associated serine/threonine protein kinase MAST205 - mouse C.Species: Mus musculus (house mouse) C.Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 24-Sep-1999 C.Accession: A54602 MOI: Cell. Biol. 13, 7625-7635, 1993 A.TRitle: A novel 205-kilodalton testis-specific serine/threonine protein kinase associat A; Reference number: A54602 A; Reference number: A54602 A; Residuas: preliminary A; Residuas: preliminary A; Residuas: 1-1734 < WAL>	A;Cros-references: GB: U02313; NID: 9406057; PIDN: AAC04312.1; PID: 9406058 C;Superfamily: unassigned Ser/Thr or Tyr-specific protein kinases; protein kinase homology cXIN> F;451-726/Domain: protein kinase APP-binding motif F;454-467/Region: protein kinase APP-binding motif C;Nety Match Best Local Similarity 21.3%; Score 141; DB 2; Length 1734; Best Local Similarity 21.3%; Pred. No. 0.28, Matches 135; Conservative 62; Mismatches 238; Indels 200; Gaps 26; Ov 161 PMIPLGIKETKE

00 000 ECVEGLEPAGN ANDO	Qy 320DMSAASLCALEQLAWAQQECVFEGISPPASMAPQDCLAQLRLAQEAAQVAAE 372 1:: ::: ::: :::	SULT 12 SULT 12 SULT 12 Food of the control of t
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A; Residues: 1-2559 <HAE>
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Best Local Similarity
Matches 50; Conserv
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A, Note: orchestrat
C; Function:
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297 SGIHLSPTAAEARRRLEPCESTSARHRWTGTGSVKSSATSEPLPACLGTLGPLPHGPWAS 356
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86 LOSRRAQIHQQIDKELQMRTG-----AENLYRATS---NNR-----VRETVALE 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              154 VQQLEEQV-QSLTKELQGLRGVLQGLSGRLAEDVQRAVETAFNGRQQPADAAARPGVHET 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                127 LSYVNSNLQLL-----KEELEELSG--GVDPGRHGSEAVTVPMIPLGLKETKELDWST 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     333 ELGRRLAELERRLDVVAGSVTVLSGRRGTELGGAAGQGGHPPGYTSLASRLSRLEDRFNS 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   213 LNEIOHOLOLLIDTRVSTHDQELGHLNNHHGGSSSSGGSRAPAPASAPPGPSEELLRQLEQ 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               441
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LSPPASMAPODCLAQLRL-----AQEAAQVAAE--YRLVHRTWAQPPVHDYVPVS 392
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      --DGFSVFGGSSGSALQALQGELSEVILSF 630
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             47 WRGCRVHRGED------PVRVHVGPMNPQLHAVGCDS-LTQI-----QCGQ 85
                                                                                                                                                                   Species: Homo sapiens (man)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     273 RIQESCSVCLAGLDGFRRQQQEDRERLRAMEKLLASVEERQRHLAGLAVGRRPPQECCSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -LTPAR-----SLGLFFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDR
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                                                                                                                                                                                                                 Riottenwaelder, B.; Obermaier, B.; Mewes, H.W.; Gassenhuber, J.; Wiemann, submitted to the Protein Sequence Database, May 1999
A;Reference number: 216474
A;Accession: 108772
A;Molecule type: mRNA
A;Residues: 1-992 <OTT>
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                                                                                                                                                                                                                                                                                                                                                                                                                  Length 992;
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                                                                   ----POPQWIGGWSCHCPEISPSPGEPPSCPCPPG 392
                               684 PRPLLNWSRKAQQGKTGGCPQPCAPVKPA---PPSSLKHPG 721
                                                                                                                                                                                                                                                                                                                        Cross-references: EMBL:AL050138

'Experimental source: adult uterus; clone DXPZp586M121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               393 WTALVHVKAEYFRSL-----AHYHVAMALCDGSPATEGEL-
                                                                                                                                                                                                                                                                                                                                                                                                           3.6%; Score 135.5; DB 2;
21.2%; Pred. No. 0.31;
tive 71; Mismatches 297;
                                                                                                                                                   hypothetical protein DKFZp586M121.1 - human (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   178 PLKELISVHF-GEDG-----
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Best Local Similarity 21.2
Matches 184; Conservative
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                                                                                                                                                                                                      Accession: T08772
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probable guanine nucleotide exchange factor RhoGEF2 - fruit fly (Drosophila melanogaster)
NyAlternate names: Shar pei/DRhoGEF2
CSpecies: Drosophila melanogaster
CSpecies: Drosophila melanogaster
CSpecies: Drosophila melanogaster
CSpecies: Drosophila melanogaster
CSPecies: Drosophila melanogaster
CSPecies: University 109223
R;Haecker, U; Perrimon, N.
R;Haecker, U; Perrimon, N.
A;Reference number: Z16586
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A;Residuss: 1-676,'L',678-837,'L',839-889,'S',891-1243,'D',1245-1358,'E',1360-1368,'R',13
A;Cross-references: EMBL:AF032870; NID:92760367; PIDN:ARC38820.1; PID:92760368
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: EMBL:AF031930; NID:g2687355; FID:g2687356
R;Barrett, K.; Leptin, M.; Settleman, J.
Cell 91, 905-915, 1997
A;Title: The Rho GTPase and a putative RhoGEF mediate a signaling pathway for the cell A;Reference number: Z16618; MUID:98088790; PMID:9428514
A;Accession: T09223
VIPGSQAAAAGLKEGDYIVSVNGQPCRWW---RHAEVVTELKAA-----GEAGASLQV 640
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                                                                                                                                                                                                                                                                      767 GAL--NSSLOLLEDRIHQLSLKDLTGPAG-----EAGPPGPGLOGPPGPAGPPGSPGK
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A,Cross-references: FlyBase:FBgn0023172
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PSTPILSGRDRTASITGPQ 367
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protein-tyrosine-phosphatase (EC 3.1.3.48) TD14 - rat
C;Species: Rattus norvegicus (Norway rat)
C;Species: Rattus norvegicus (Norway rat)
C;Species: Rattus norvegicus (Norway rat)
C;Species: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 20-Sep-1999
C;Accession: T14355
R;Cao, L; Zhang, L.; Ruiz-Lozano, P.; Yang, Q.; Chien, K.R.; Graham, R.M.; Zhou, M.
J. Biol. Chem. 273, 21077-21083, 1998
A;Title: A novel putative protein-tyrosine phosphatase contains a BRO1-like domain and A;Reference number: 218004; MUID:98361981; PMID:9694860
A;Accession: T14355
A;Accession: T14355
A;Accession: T14355
A;Residues: 1-1494 cCAo>
A;Residues: 1-1494 cCAo>
A;Caos.references: EMBL:ARO77000; NID:g3598973; PID:g3598974; PIDN:AAC62959.1
A;Experimental source: brain
C;Genetics:
A;Gene: PTP-TD14
C;Function: may be involved in regulating Ha-ras-dependent cell growt
C;Keywords: phosphoric monoester hydrolase
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Search completed: July 13, 2004, 12:07:49 Job time : 37 secs

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GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

July 13, 2004, 08:21:11; Search time 87 Seconds (without alignments) 2348.067 Million cell updates/sec Run on:

US-10-697-266-2

1 MILEERPDGAGGEESPRIQ.....QPCAPVKPAPPSSLKHPGWP 723 Perfect score: Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

1586107 seqs, 282547505 residues Searched:

1586107 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

A Geneseq 29Jan04:* Database

geneseqp1990s:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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AAB41716	AAU28082	ABB57450	AAB90656	ABP41883	ABB57451	AAB90568	ABG65430	ABB71739	ABB67517	AAY97156	AAB40651	ADD12509	ABB64827	ABB58814	ADE08492	ABG08365	ADE38413	AAW56699	ADE56061
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7.3	7.3	7.2	7.1	7.1	7.0	7.0	7.0	7.0	6.3	5.9	5.1	4.9	4.4	4.4	4.3	4.1	4.4	4.1	4.1
274.5	274.5	270.5	268	268	264.5	264.5	264.5	262.5	239	221	192	185	165.5	165	164	156.5	156.5	155.5	155.5
26	27	58	29	30	31	32	33	34	32	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

AAO18602 standard; protein; 723 AA. RESULT 1 AA018602

AA018602;

(first entry) 24-OCT-2002

Human protein kinase N family kinase.

Human, protein kinase N; kinase; PKN; eye retinoblastoma; bocio tumour; placenta choriocarcinoma; germ cell; leukocyte; uterus tumour; cancer; pre-B cell acute lymphoblastic leukaemia; Wilm's tumour; enzyme; brain anaplastic oligodendroma; uterus endometrial adenocarcinoma; cytostatic; gene therapy; chromosome 8.

Homo sapiens.

WO200261062-A2.

08-AUG-2002.

29-JAN-2002; 2002WO-US002152.

01-FEB-2001; 2001US-00773371.

(PEKE) PE CORP NY.

WPI; 2002-608516/65

Beasley EM; Di Francesco V, Ketchum KA, Rusch D,

N-PSDB; AAL48837, AAL48838.

New human kinase peptide and nucleic acid molecule, useful for treating disorders associated with abnormal expression of kinase protein, e.g. retinoblastoma, Milm's tumor, in drug screening assays and pharmacogenomic analysis.

Claim 1; Fig 2; 76pp; English.

The present invention provides the protein and coding sequences of a novel human protein kinase N family protein. The sequences can be used in the treatment of disorders associated with the absence of, inappropriate, or unwanted expression of the protein, e.g. eye retinoblastoma. Wilm's tumour, placenta choriocarcinomas, bocio tumours, pre-B cell acute lymphoblastic leukaemias, uterus tumours, brain anaplastic oligodendromas and uterus endometrial adenocarcinomas. The present sequence is the

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WPI; 2003-018929/01
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Pred. No. 0;
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Swarnakar A, Duggan BM, Lu DAM, Thangavelu K;
Khan FA, Yao MG, Emerling BM;
myotonic dystrophy; catatonia; endocrine disorder; diabetes; Grave's disease; cancer; leukemia; cervical cancer; breast cancers; immunological disorder; scleroderma; systemic lupus erythematosus; allergy; gastrointestinal disorder; Crohn's disease; renal disorder; Goodpasture's syndrome; infection; cardiovascular disorder; atherosclerosis; hepatic disease; cirrhosis.
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                                                                                                                                                                               Location/Qualifiers
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05-JAN-2001; 2001US-0260102P.
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Baughn MR,
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Warren BA,
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GLKEGDYIVSVNGQPCRWWRHAEVVTELKAAGEAGASLQVVSLLPSSRLPSLGDRRPVLL 548 GLKEGDYIVSVNGQPCRWWRHAEVVTELKAAGEAGASLQVVSLLPSSRLPSLGDRRPVLL

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608 GPRGLLRSQREHGCKTPASTWASPRPLLINWSRKAQQGKTGGCPQPCAPVKPAPPSSLKHP GPRGLLRSQREHGCKTPASTWASPRPLLNWSRKAQQGKTGGCPQPCAPVKPAPPSSLKHP

GWP 723

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The present sequence represents an intracellular signalling molecule.

Such molecules are designated INTSIG. The INTSIG polypeptide or its
fragments, and the INTSIG polymucleotide are useful in diagnosing,
or activity of INTSIG, such as neurodegenerative disorders (e.g.
Parkinson's disease, Alzheimar's disease), muscular disorders (e.g.
Myotonic dystrophy, catatonia), endocrine disorders (e.g. diabetes,
crave's disease), cancers (e.g. leukemia, cervical or breast cancers),
immunological disorders (e.g. scleroderma, systemic lupus erythematosus,
climquinological disorders (e.g. scleroderma, systemic lupus erythematosus,
allergies), gastrolintestinal disorders (e.g. Crohn's disease), renal
cdisorders (e.g. atheroselerosis), or hepatic diseases (e.g. cirhosis).

Colimorders (e.g. atheroselerosis), or hepatic diseases (e.g. cirhosis).

NTSIG or its fragments may also be used in screening for compounds that
specifically bind to and modulate the activity of INTSIG. The
colimoration in the sease contains or transgenic
animals to model human disease
                                            INTSIG polypeptides, useful for diagnosing, preventing, and treating disorders associated with an abnormal expression or activity of INTSIG, e.g. neuromuscular, immunological, cardiovascular disorders, cancer and
                                                                                                                                                                                 Claim 1; Page 105-106; 126pp; English.
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Sequence 670 AA;

1; 240 180 127 187 300 247 360 307 420 367 480 427 487 547 9 20 67 RAAGAFSLLRENFSHAPSPDMSAASLCALEQLMMAQAQECVFEGLSPPASMAPQDCLAQL PATEGELPTHEQVFLQPPTSSKPRGPVLPQELEERRQLGKAHLKRAILGQEEALRLHALC MILEBRPDGAGGESPRLQISRRKPRXTRVSSLRGRREGLRDVCAWRGCRVHRGEDPVR MILEERPDGAGEGSPRIQ-----61 VHVGPMNPQLHAVGCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVR ETVALELSYVNSNLQLLKEELEELSGGVDPGRHGSEAVTVPMI PLGLKETKELDWSTPLK ELISVHFGEDGASYEAEIRELEALRQAMRTPSRNESGLELLTAYYNQLCFLDARFLTPAR SLGLFFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQ SLGLFFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQ RAAGAFSLIRENFSHAPSPDMSAASLCALEQLMMAQAQECVFEGISPPASMAPQDCLAQL ------GCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVR RLAQEAAQVAAEYRLVHRTMAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDGS PATEGELPTHEQVFLQPPTSSKPRGPVLPQELEERRQLGKAHLKRAILGGEEALRLHALC RVLREVDLLRAVISQTLQRSLAKYAELDREDDFCEAAEAPDIQPKTHQKPEARMPRLSQG KGPDIFHRLGPLSVFSAKNRWRLVGPVHLTRGEGGFGLTLRGDSPVLIAAVIPGSQAAAA Gaps 53; DB 6; Length 670; Indels ., 91.4%; Score 3449.5; 92.7%; Pred. No. 0; 0; Mismatches Matches 670; Conservative Local Similarity Н 128 188 248 308 368 21 121 89 181 241 301 361 421 481 428 488 Query Match a g g g à δ g à 유 g ò g Š à à qq à à

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention provides the protein and coding sequences of a novel human protein kinase N family protein. The sequences can be used in the treatment of disorders associated with the absence of, inappropriate, or unwanted expression of the protein, e.g. eye retinoblastoma, wilm's tumour, placenta choriocarcinomas, bocio tumours, pre-B cell acute lymphoblastic leukaemias, uterus tumours, brain anaplastic oligodendromas and uterus endometrial adenocarcinomas. The present sequence is a murine protein, Note: The present sequence is not described further in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MILEERPDGAGGEESPRLQISRRKPRKTRVSSLRGRREGLRDVCAWRGCRVHRGEDPVR 60
                                                                                                                                                                                                                 Human; protein kinase N; kinase; PKN; eye retinoblastoma; bocio tumour; placenta choriocarcinoma; germ cell; leukocyte; uterus tumour; cancer; pre-B cell acute lymphoblastic leukaemia; Wilm's tumour; enzyme; brain anaplastic oligodendroma; uterus endometrial adenocarcinoma; cytostatic; gene therapy; chromosome 8; mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New human kinase peptide and nucleic acid molecule, useful for treatidiscrders associated with abnormal expression of kinase protein, e.g. retinoblastoma, Wilm's tumor, in drug screening assays and pharmacogenomic analysis.
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                                                                                                                                                                                   Human protein kinase N family kinase related murine protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 67.0%; Pred. No. 6.6
Matches 473; Conservative 49; Mismatches
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                                                                               AA018603 standard; protein; 634 AA
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07-MAY-2001; 2001US-00849334.
                                                                                                                                                                                                                                                                                                                                                                                                                           29-JAN-2002; 2002WO-US002152
                                                                                                                                                   (first entry)
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                                                                                                                                                                                                                                                                                                                         Mus musculus.
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                                                                                                                 AA018603;
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AAO18603
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                                                                               ------GPLSVFSTKNRWQLVGPVHMTRGEGGFGFTLRGDSPVLIAAVVPGGQAESA
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                     ------KGYGSFVQNQPGQLQSHRARLHQQISKELRWRTGAENLYRATSNTWVR
                                                                ETVALELSYVNSNLQLLKEELEELSGGVDPGRHGSEAVTVPMI PLGLKETKELDWSTPLK
                                                                                                                              ELISVHFGEDGASYEAEIRELEALRQAMRTPSRNESGLELLTAYYNQLCFLDARFLTPAR
                                                                                                                                                                                          SLGLFFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQ
                                                                                                                                                                                                              SPGLLFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDCSCTEGTNHAAEAFQ
                                                                                                                                                                                                                                                       RAAGAFSLIRENFSHAPSPDMSAASICALEQIMMAQAQECVFEGISPPASMAPQDCLAQI
                                                                                                                                                                                                                                                                                                                   RLAQEAAQVAAEYRLVHRTMAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDGS
                                                                                                                                                                                                                                                                                                                                                                                   PATEGELPTHEQVFLQPPTSSKPRGPVLPQELEERRQLGKAHLKRAILGQEBALRLHALC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KGPDIFHRLGPLSVFSAKNRWRLVGPVHLTRGEGGFGLTLRGDSPVLIAAVIPGSQAAAA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  634
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DGI-3; identification; cytostatic; gene therapy; cancer Human Rhophilin amino acid sequence SEQ ID NO:27 AA 643 18-OCT-2002; 2002WO-US033511 19-OCT-2001; 2001US-0342892P ABM32685 standard; protein; entry) (first WO2003033675-A2 Homo sapiens 06-OCT-2003 24-APR-2003 ABM32685 ABM32685

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The present invention describes an isolated mucleic acid (I) comprising:

(a) a sequence encoding A1, G3, D9, C5, D1, H2, H3, G12, E7 or A1 or

C (a) a sequence encoding A1, G3, D9, C5, D1, H2, H3, G12, E7 or A1 or

Denetrating variants; (b) a sequence comprising at least 15 contiguous

nucleic acid; (2) a virus comprising the nucleic acid; (3) a host cell

comprising the vector; (4) a primer or probe comprising the nucleic acid;

(5) an isolated peptide comprising the anino acid sequence of A1, G3, D9,

C5, D1, H2, H3, G12, E7 or A1 or penetrating variants; (6) an antibody

that binds to the isolated peptide; (7) an isolated polypeptide complex,

C comprising the peptide and DG1-polypeptide complex; (8) a peptide library

c comprising the peptide; (9) identifying a DG1-3 binder; (10) identifying

C a DG1-3 antagonist agent; (11) diagnosling cancer; (12) a pharmaceutical

c a DG1-3 antagonist agent; (11) diagnosling cancer; (12) a pharmaceutical

c mammalian cell of a gene whose activity is regulated by DG1-3. (1) has

CC cytostatic activity and can be used in gene therapy. The nucleic acid (1)

can be used for preparing a composition for diagnosing or treating

cancer. ACFS6944 to ACFS7031 and ABM32656 to ABM32775 represent sequences

cused in the exemplification of the present invention VHVGPMNPQLHAVGCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVR 120 240 SLGLFFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQ 300 254 RAAGAFSLLRENFSHAPSPDMSAASLCALEQLAMAQAQECVFEGLSPPASMAPQDCLAQL 360 DGI-3 nucleic acid useful for preparing a composition for diagnosing SPGLLFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDCSCTEGTNHAAEAFQ ------KGYGSFVQNQPGQLQSHRARLHQQISKELRMRIGAENLYRAISNIWVR ETVALELSYVNSNLQLLKEELEELSGGVDPGRHGSEAVTVPMIPLGLKETKELDWSTPLK ELISVHFGEDGASYEAEIRELEALRQAMRTPSRNESGLELLTAYYNOLCFLDARFLTPAR 1 MILEERPDGAGAGEESPRLQISRRKPRKTRVSSLRGRREGLRDVCAWRGCRVHRGEDPVR MILEERPDGQGTGEESSRPQDD------GSIR------72; Length 643; 61.8%; Score 2331; DB 6; 67.0%; Pred. No. 7e-213; ive 49; Mismatches 112; 6; Fig 4B; 215pp; English Matches 473; Conservative Local Similarity Sequence 643 AA; 19 75 135 195 27 121 181 301 Query Match g ò q à g ò ద à g ò δ

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Goldstein NI;

Blume AJ,

Pillutla R,

WPI; 2003-393525/37.

(DGIB-) DGI BIOTECHNOLOGIES INC

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The invention relates to novel human diagnostic and therapeutic polynucleotides designated dithp (ACC46080-ACC46749) and to their encoded proteins (DITHP, ARR41181-2). The invention also relates to polynucleotide sequences at least 90% identical to the dithp converse of the invention; recombinant vectors, host cells and transgenic organisms comprising a dithp nucleic acid sequence; the proteins; microarrays comprising dithp nucleic acid sequences; methods of detecting dithp nucleic acid sequences; methods of detecting dithp nucleic acid sequences; methods of detecting dithp nucleic and protein sequences; methods of screening for compounds which specifically bind a DITHP protein; and methods of assessing the toxicity of test compounds using a dithp hybridisation probe. Dithp nucleic acid sequences and DITHP proteins may be used in the
                                                                                                                                                                                                                                                                                                                             cancer; cell proliferative disorder; autoimmune disorder; inflammatory disorder; infection; hormonal disorder; metabolic disorder; neurological disorder; gastrointestinal disorder; transport disorder; connective tissue disorder; drug screening; proteome analysis; gene therapy; antisense therapy; genocyping; transgenic animal; knock in; disease model; toxicological testing; transcript imaging;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel human diagnostic and therapeutic polypeptide useful for identifying test compound which specifically binds to a polypeptide encoded by human diagnostic and therapeutic polynucleotide, and to induce antibodies.
535 GLKEGDYIVSVNGQPCKWWKHLEVVTQLRSMGEEGVSLQVVSLLPSPEPRGTGPRRAALL 594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jones AL, Tran AB, Dahl CR, Gietzen D, Chinn J;
Hillman JL, Yu JY, Tuason O, Yap PE, Amshey SR;
SC, Daw TC, Liu TF, Nguyen DA, Kleefeld Y, Gerstin EH;
H, David MH, Lewis SA, Chen AJ, Panzer SR, Harris B;
Marwaha R, Lo A, Lan RY, Urashka ME;
                                                                                                                                                                                                                                                                                                              dithp; diagnostic and therapeutic polynucleotide; diagnosis;
                                  661 GPRGLLRSQREHGCKTPASTWASPRPLLNWSRKAQQGKTGGCPQPC 706
                                                         595 W-----NQRECGFETPMPTRTRPWPILGWSRKNKQGKTGSHPDPC 634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 27; SEQ ID NO 1296; 591pp; English.
                                                                                                                                                                                                                                                                      Human DITHP biochemical pathway protein.
                                                                                                                                                             ABR41761 standard; protein; 272 AA
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2001US-0280068P.
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Flores V, Marwaha R,
                                                                                                                                                                                                                                                                                                                                                                                                                                             biochemical pathway.
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N-PSDB; ACC46698.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
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29-MAR-2001;
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Displayers of a wide variety or condutions including cancer and other cell proliferative disorders; autoimmune or inflammatory disorders; bacterial, viral, fungal or parasitic infections; hormonal disorders; metabolic disorders; metabolic adisorders; metabolic adisorders; metabolic disorders; rensport disorders; and connective tissue disorders. They may also be used to case of the protecome of a tissue case and connective tissue disorders. They may also be used to protein activity or gene expression. DITHP controlly by useful in somation used in analysis of the protecome of a tissue or cell type and to induce antibodies. The dithp nucleic acids are additionally useful in somatic or germline gene therapy of the disorders mentioned above, as a source of antisense sequences, as a source of probes and primers, in genotyping and identification of individuals, in the generation of transgenic animal models of human disease or knock in humanised animals, in toxicological testing, and in transcript imaging. The present sequence tepresents a DITHP protein which is involved in a biochemical pathway. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format controlly from WIPO at ftp. wipo.int/pub/published_pct_sequences
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; cancer associated gene; cancer antigen; detection; cancer; diagnosis; cytostatic; proliferative; vulnerary; immunomodulator; antidabetic; antisthritic; antistriritic; antistriritic; antistriritic; antistriritic; antistriritic; antistriritic; antistriritic; antistriritic; antibacterial; cardiant; dermatological; neuroprotective; thrombolytic; coagulant; nootropic; vasotropic; antipsoriatic; antiangiogenic; gene therapy; inflammation; immune disorder; hamatopoietic cell disorder; autoimmune disorder; allergic reaction; graft versus host disease; organ rejection; haemostatic; thrombolytic; cardiovascular disorder; infection; neurological disease; drug screening.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      459 GKAHLKRAILGQEBALRLHALCRVLREVDLLRAVISQTLQRSLAKYAELDREDDFCBAAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APDIQPKTHQKPEARMPRLSQGKGPDIFHRLGPLSVFSAKNRWRLVGPVHLTRGEGGFGL
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      cancer and other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                37.1%; Score 1401; DB 6; L
100.0%; Pred. No. 1.2e-124;
cive 0; Mismatches 0;
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    variety of
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                          Sequence 272 AA;
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08-MAR-2000; 2000WO-US005882.

Human, cancer related protein, food additive; preservative; immunogen; antibody; bone cancer; adrenal cancer; bone marrow cancer; breast cancer; immune disorder; diver cancer; lung cancer; urgential cancer; immune disorder; Addison's disease; allergy; diabetes mellitus; autoimmune haemolytic anaemia; autoimmune thyroiditis; Crohn's disease; amultiple sclerosis; rheumatoid arthritis; ulcerative colitis; acquired immunodeficiency syndrome; AIDS; cardiovascular disorder; myocardial ischaemia; wound healing; neurological disorder; barkineno's disease; Albrimer's disease; cerebral anoxia; epilepsy; viral infection; bacterial infection; fungal infection; epilepsy; parasitic infection; agonist; antagonist.

us-10-697-266-2.rag

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AAC77607 to AAC78449 encode the human cancer associated proteins given in AAC77607 to AAB44239. The proteins can have activities based on the tissues and cells the genes are expressed in. Example of activities include: cytostatic; proliferative; valnetary; immunomodulator; antidabetic; antiasthmatic; antishemmatic; antibacterial; antivital; antidametory; antityproteive; antialpractic; antibacterial; antiviral; dermatological; neuroprotective; cardiant; thrombolytic; coagulant; cootropic; vasotropic; antipsoriatic and antiangiogenic. The polymoclectides and polypeptides can be used for preventing, treating or ameliorating medical conditions and diagnosing pathological conditions. Colymucleotides, polypeptides and antiangiogenic and antiagonists from the present invention may be used to treat immune disorders by activating or inhibiting the proliferation, differentiation or mobilisation of immune cells, to treat disorders of haematopoletic cells, autoimmune disorders, allergic reactions, graft versus host disease and organ rejection, modulate haemostatic or thrombolytic activity, modulate caption; and antagonists may be also be used in drug screens. AAC78449 to AAC78457 and AAB4440 represent sequences used in the exemplification of
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             459 GKAHLKRAILGQEEALRLHALCRVLREVDLLRAVISQTLQRSLAKYAELDREDDFCEAAE 518
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                   comprising sequences encoding peptides
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                                                                                                                              cancer
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0; Mismatches
                                                                                                                                                     Claim 11; Page 1597-1598; 2352pp; English.
                                                                                                                             useful for treating or diagnosing e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAU00869 standard; protein; 257 AA.
                                                                                                                   acids
            99US-0124270P
                                  (HUMA-) HUMAN GENOME SCI INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity 99.2
nes 245; Conservative
                                                                                                                   isolated nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                  the present invention
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                                                          Ruben SM;
                                                                                2000-587533/55.
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                                                                                           N-PSDB; AAC77780
                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 257 AA;
            12-MAR-1999;
                                                          Rosen CA,
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Human cancer related protein 5.

(first entry)

04-JUL-2001

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The sequence represents a novel Human cancer related protein. The polymucleotides and polypeptides are useful for preventing, treating or ameliorating a medical condition in e.g. humans, mice, rabbits, goats, horses, cats, dogs, chickens or sheep. The polypeptides can also be used as a food additive or preservative to increase or decrease storage capabilities. The polymucleotide are useful for chromosome (dentification. The mucleic acids, protein, antibodies, agonists and antagonists are useful in the diagnosis, treatment and prevention of cancer (e.g. cancers of the adrenal gland, bone, bone marrow, breast, cg astrointestinal tract, liver, lung, or urogenital), immune disorders (c.g. Addison's disease, allergies, autoimmune haemolytic anaemia, autoimmune thyroiditis, diabetes mellitus, Crohn's disease, multiple collections, syndrome, AlDS), cardiovascular disorders such as myocardial ischemias, wound healing, neurological diseases (e.g. myocardial ischemias, wound healing, neurological diseases (e.g. and infections diseases such as viral, bacterial, fungal and parsitic infections. Numerous examples of each type of disorder are given in the copy and the collication.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Twenty nine nucleic acid molecules encoding human cancer associated proteins, useful in the prevention, treatment and diagnosis of cancer, immune disorders, cardiovascular disorders and neurological diseases.
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                                                                                        /label= Immunogenic_epitope
84. .91
/label= Immunogenic_epitope
                                                                                                                                                                                                                                                                                 216. .224
/label= Immunogenic_epitope
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/label= Immunogenic_epitope
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                                                          location/Qualifiers
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Homo sapiens
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                                                68 APDIQPKTHQKPEARMPRLSQGKGPDIFHRLGPLSVFSAKNRWRLVGPVHLTRGEGGFGL 127
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                                                                                              QVVSLLPSSRLPSLGDRRPVLLGPRGLLRSQREHGCKTPASTWASPRPLLNWSRKAQQGK
             459 GKAHLKRAILGQEEALRLHALCRVLREVDLLRAVISQTLQRSLAKYAELDREDDFCEAAE
                      TLRGDSPVL1AAV1PGSQAAAAGLKEGDY1VSVNGQPCRWWRHAEVVTELKAAGEAGASL
                                                                            128 TLRGDSPVLIAAVIPGSQAAAAGLKEGDXIVSVNGQPCRWWRHAEVVTELKAAGEAGASL
                                        519 APDIQPKTHQKPEARMPRLSQGKGPDIFHRLGPLSVFSAKNRWRLVGPVHLTRGEGGFGL
 Gaps
                                                                                                                                                                                                                               NOVX; cytostatic; cardiant; antiarteriosclerotic; antiasthmatic; canc
hypotensive; cardiomyopathy; bronchial asthma; gene therapy; vaccine;
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Indels
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0; Mismatches
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2001US-0278152P.
2001US-0278894P.
2001US-0278999P.
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2001US-0280822P.
2001US-0280900P.
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2001US-0275579P.
2001US-0275601P.
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2001US-0276776P.
2001US-0276994P.
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2001US-0279344P.
2001US-0277338P.
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2001US-0274281P.
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2001US-0277791P.
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                                                                                                                                                                                                    (first entry)
245; Conservative
                                                                                                                                                                                                                  Human NOV126b protein
                                                                                                                         TGGCPQP 705
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                                                                                                                                      TGGCPSP
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02-APR-2001; 2
02-APR-2001; 2
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20-MAR-2001;
21-MAR-2001;
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23-MAR-2001;
26-MAR-2001;
27-MAR-2001;
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08-MAR-2001;
09-MAR-2001;
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13-MAR-2001;
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19-MAR-2001;
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This invention describes novel human NOVX polypeptides which have cytostatic, cardiant, antiarteriosclerotic, antiasthmatic and hypotensive activity. Pharmaceutical compositions comprising the NOVX proteins or nucleic acid molecules or NOVX antibodies are useful for preventing or treating a disorder associated with aberrant NOVX expression or activity e.g. cancer, hypertension, atherosclerosis, cardiomyopathy or bronchial asthma. The products of the invention can be used for gene therapy or in a vaccine. ABU65041-ABU65218 represent the NOVX polypeptides encoded by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        , Anderson D;
Alsobrook JP;
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04-APR-2001; 2001US-0281194P.
13-APR-2001; 2001US-0283675P.
30-APR-2001; 2001US-028866P.
03-MAY-2001; 2001US-028866P.
03-MAY-2001; 2001US-028852BP.
15-MAY-2001; 2001US-028852BP.
16-MAY-2001; 2001US-029852BP.
16-MAY-2001; 2001US-029169PP.
16-MAY-2001; 2001US-0294889P.
31-MAY-2001; 2001US-0294889P.
31-MAY-2001; 2001US-0294889P.
31-MAY-2001; 2001US-029489P.
19-JUN-2001; 2001US-0299303P.
19-JUN-2001; 2001US-0299310P.
10-JUL-2001; 2001US-0299310P.
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12-SEP-2001; 2001US-0318770P.
27-SEP-2001; 2001US-0325430P.
27-SEP-2001; 2001US-0325681P.
18-OCT-2001; 2001US-033380P.
31-OCT-2001; 2001US-0335101P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14-NOV-2001; 2001US-0332271P.
14-NOV-2001; 2001US-0332272P.
14-NOV-2001; 2001US-0333184P.
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03-JAN-2002; 2002US-0345705P.
07-MAR-2002; 2002US-00092900.
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Gusev V,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (CURA-) CURAGEN CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2002-723332/78.
N-PSDB; ABX97183.
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Spaderna SK,
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Zerhusen BD,
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74 GCDSLIQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVRETVALELSYVNSN 133

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Sequence 686 AA;
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83
                                                                                                                                                                                                                                                                                                                                                                                                                       benign prostatic hyperplasia; acute prostatitis; testicular cancer; cryptorchidism; testicular disorder; proliferative disorder; lymphoma; leukaemia; melanoma; ovarian cancer; breast cancer; pancreatic cancer;
                         GCNPLAQTGRSKLONORAALNOQILKAVRMRTGAENLLKVATNSKVREQVRLELSFVNSD
                LQLLKEELEELSGGVDPGRHGSEAVTVPMIPLGLKETKELDWSTPLKELISVHFGEDGAS
                                                  YEAEIRELEALROAMRTPSRNESGLELLTAYYNOLCFLDARFLTPARSLGLFFHWYDSLT
                                                                                  GVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQRAAGAFSLLRENF
                                                                                                                  SHAPSPDMSAASLCALEQLMMAQAQECVFEGLSPPASMAPQDCLAQLRLAQEAAQVAAEY
                                                                                                                           THTPSYDMSPAMLSVLVKMMLAQAQESVFEKISLPG--IRNEFFMLVKVAQEAAKVGEVY
                                                                                                                                                 RLVHRIMAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDG--SPATEGELPTHE
                                                                                                                                                                                    QVFLQPPTSSKPRG--PVLP-QELBERRQLGKAHLKRAILGQEBALRLHALCRVLREVDL
                                                                                                                                                                                                                    LRAVISQTLQRSLAKYAELDREDDFCEAAEAPDIQPKTHQKPEARMPRLSQGKGPDIFHR
                                                                                                                                                                                                                                                     LGPLSVFSAKNRWRLVGPVHLTRGEGGFGLTLRGDSPVLJAAVIPGSQAAAAGLKEGDYI
                                                                                                                                                                                                                                                              New polynucleotide for the diagnosis, prevention and treatment for
                                                                                                                                                                                                                                                                                                                                                                                                               prostate specific protein; PSL22; prostate cancer;
                                                                                                                                                                                                                                                                                     647
                                                                                                                                                                                                                                                                                              VSIQLVDCKWLTLSEVMKLLKSFGEDEIEMKVVSLLDST 597
                                                                                                                                                                                                                                                                                     VSVNGQPCRWWRHAEVVTELKAAGEAGASLQVVSLLPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                  liver cancer; lung cancer; cytostatic.
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                                                                                                                                                                                                                                                                                                                                              protein;
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                                                                                                                                                                                                                                                                                                                                              AAU10192 standard;
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The invention relates to substantially pure prostate-specific or testis-
specific polypeptides and the nucleic acids encoding them. Also included
are vectors and host cells expressing the proteins, a transgenic animal
expressing the protein, antibodies against the proteins, probes for
detecting the nucleic acids, antisense molecules for the nucleic acids
and methods of isolating modulators of the proteins. Compounds that
modulate the prostate specific or testis specific polypeptide are useful
to diagnose, prevent or treat disorders of the testis or prostate
particularly prostate cancer, benign prostatic hyperplasia, acute
prostatis, testicular cancer, cryptorchidism, undescended, retractile,
ascending or vanished testis. Other proliferative disorders for which the
modulacors may be used include lymphoma, leukaemia, melanoma, ovarian
cancer, breast cancer, pancreatic cancer, liver cancer and lung cancer.
The present sequence represents a prostate specific protein, PSL22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             548
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83
and testis disorders, particularly prostate cancer, comprises
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RLVHRTMAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDG--SPATEGELPTHE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVRETVALELSYVNSN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               144 YEDEIADIMDIRQACRIPSRDEAGVELIMIYFIQIGFVESRFFPPIRQMGLLFTWYDSLT
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                                  prostate-specific or testis-specific nucleic acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                / Match 33.3%; Score 1255; DB 4; Local Similarity 45.9%; Pred. No. 4.6e-110; les 266; Conservative 107; Mismatches 196;
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Novel GTP-Rho binding protein 2 and nucleic acids encoding the protein, useful for the manufacture of a medicament for treating a disease associated with altered expression or activity of human GRBP2 protein.
                            Human; GTP-Rho binding protein 2; GRBP2; chromosome 19q12; antigen;
oncogene; tumour; liposarcoma; ichthyosis congenita III; vaccine;
benign familial infantile convulsion; gene therapy.
              Human GTP-Rho binding protein 2.
                                                                                                                                                                                                                                                                                            Claim 10; Fig 3; 101pp; English
                                                                                                                                                ; 2001WO-US000666.; 2001WO-US000667.; 2001WO-US000668.; 2001WO-US000669.
                                                                                                                                   2001WO-US000664,
2001WO-US000665,
                                                                                                                                                                                       29-JUN-2001; 2001US-00895040
                                                                                                          17-JAN-2002; 2002EP-00001026
                                                                                                                                                                                2001WO-US000670
                                                                                                                                                                                                                                             P-PSDB; ABS71855, ABS71856.
(first entry)
                                                                                                                                                                                                       (AEOM-) AEOMICA INC
                                                                                                                                                                                                                                     2002-684026/74
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                                                                                                                                                 30-JAN-2001;
                                                                            EP1231216-A2
                                                                                                                                  30-JAN-2001;
                                                                                                                                                                30-JAN-2001;
                                                             Homo sapiens
                                                                                                                                                                       30-JAN-2001;
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                                                                                           14-AUG-2002
                                                                                                                                                                                                                      Shannon ME,
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The invention relates to an isolated GTP-Rho binding protein 2 (GRBP2)

polypeptide or a fragment of at least 6 amino acids or a sequence in
which at least 95% of deviations from GRBP2 sequences are conservative
which at least 95% of deviations from GRBP2 sequences are conservative
constitutions. Also included are an isolated mucleic acid (GRBP2 NA)
encoding GRBP2 comprising the full length cDNA or CDS, fragments or
animals modified to contain GRBP2 NA or unable to express the endogenous
corthologue of GRBP2 NA GRBP2 in the decide by a mutation in human
GRBP2 or altered expression of GRBP2 in the agonists of GRBP2. GRBP2
microarrays, fusion proteins and screening for agents that modulate the
expression of GRBP2 NA and Ab are useful in therapy and in the
expression of GRBP2 NA and Ab are useful in therapy and in the
associated with increased or decreased expression or activity of human
GRBP2 (e.g. tumours, liposarcoma, ichthyosis congenita III and benign
familial infantile convulsion, all associated with the chromosomal
confined GRBP2 (GRBP2 is useful as a standard in immunoassay
specific for the proteins, to be used in a therapeutic agent, as
correction of GRBP2, 199(12) (GRBP2 is useful as a standard in immunoassay
concines, to be and as antigens (e.g. for epitope mapping) or immunoassay
concines, to be and as antigens (e.g. for spirce first strand cDNA sequence
con an mRNA template, and to drive in vivo expression of the proteins. The
disparate organisms, for inserting GRBP2 NA into host cell chromosome,
concined to prime synthesis of mucleic acids, to prime first strand cDNA sequence
con an mRNA template, and to drive in vivo expression of the proteins to
disparate organisms, for inserting GRBP2 NA into host cell chromosome,
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Sequence 686 AA;

(INCY-) INCYTE GENOMICS INC.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOKVLCAAQERSRLTYAQHQEEDDLLNLIDAPSVVAKTEQEVDIILPQFSKLTVTDFFQK 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human, guanosine triphosphate binding associated protein, GTP, GBAP, inflammation, AIDS, Addison's disease, anaemia, arteriosclerosis, asthma, autoimmune disorder, hepatitis, multiple sclerosis, cancer, diabetes,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCTEGARRAMEAFQRAAGAFSLLRENF 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SHAPSPDWSAASLCALEQLMMAQAQECVFEGLSPPASMAPQDCLAQLRLAQEAAQVAAEY 373
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                                                                                                                      74 GCDSLTQIQCGQLQSRRAQIHQQIDKELQMRTGAENLYRATSNNRVRETVALELSYVNSN
                                                                                                                                                             24 GCNPLAQTGRSKLQNQRAALNQQILKAVRMRIGAENLLKVATNSKVREQVRLELSFVNSD
                                                                                                                                                                                                                                             134 LQLIKEELEELSGGVDPGRHGSEAVTVPMIPLGLKETKELDWSTPLKELISVHFGEDGAS
                                                                                                                                                                                                                                                                                                                                                                                                       194 YEAEIRELEALRQAMRTPSRNESGLELLTAYYNQLCFLDARFLTPARSLGLFFHWYDSLT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RLVHRTMAQPPVHDYVPVSWTALVHVKAEYFRSLAHYHVAMALCDG--SPATEGELPTHE
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                                                                   Gaps
                                                                   10;
         Length 686;
                                                                Indels
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                                                         Matches 265; Conservative 107; Mismatches 197;
   Score 1249; DB 5;
Pred. No. 1.7e-109;
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   33.1%;
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                                Similarity
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Query Match
Best Local 9
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19-JUN-2001;
19-JUN-2001;
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31-JUL-2001;
16-AUG-2001;
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31-MAY-2001;
31-MAY-2001;
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28-MAR-2001;
30-MAR-2001;
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15-MAY-2001;
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26-MAR-2001;
27-MAR-2001;
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04-APR-2001;
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03-MAY-2001;
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20-MAR-2001;
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30-MAR-2001;
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20-MAR-2001;
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                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention relates to novel human guanosine triphosphate (GTP)-binding associated proteins (GBAPs; AAB68501-AAB6856) and their coding sequences (AAF58301-AAF58366). The proteins and coding sequences of the present invention are useful for treating a variety of disorders including inflammation, AIDs, Addison's disease, anaemia, arteriosclerosis, asthma, autoimmune disorders, Grave's disease, hepatitis, multiple sclerosis, cancer, diabetes, osteoporosis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  74
                                                                                                                                                                                                                                    New guanosine triphosphate-binding associated proteins (GBAP) and their encoding nucleic acids, useful for treating and/or diagnosing diseases associated with GBAP expression, such as cancer, diabetes and asthma.
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                                                                    Patterson C;
                                       Au-Young J;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ouery Match 32.8%; Score 1236; DB 4; Length 60 Best Local Similarity 46.1%; Pred. No. 2.9e-108; Matches 262; Conservative 106; Mismatches 190; Indels
                                    Hillman JL, Lal P,
Lu DAM, Azimzai Y,
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ABU65215
LD ABU65215 standard; protein; 686
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                                    Tang YT, Bandman O,
Yang J, Baughn MR,
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NOVX; cytostatic; cardiant; antiarteriosclerotic; antiasthmatic; cancer; hypotensive; cardiomyopathy; bronchial asthma; gene therapy; vaccine;
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2001US-0294485P.
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2001US-030434F
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2001US-0318470P
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                                                                                               ytek KA, Shenoy SG, Taupler L, Kekuur, Jusev V, Ji W, Gorman L, Miller CE, Kekuur, Gangolli E, Vernet CAM, Guo X, Tchernev V; Thernev V; Talangolli E, Walyankar UM, Gerlach V, Liu Y, Anderson D; Tanan SJ, Malyankar UM, Gerlach W, Liu Y, Anderson D;
                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                      This invention describes novel human NOVX polypeptides which have cytostatic, cardiant, antiarteriosclerotic, antiasthmatic and hypotensive catcivity. Pharmaceutical compositions comprising the NOVX proteins or nucleic acid molecules or NOVX antibodies are useful for preventing or treating a disorder associated with aberrant NOVX expression or activity estimate. The products of the invention can be used for gene therapy or in a vaccine. ABM597008-ABX97185
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                                                                                                                                                                                                                  NOVX polypeptides and polynucleotides, useful for preventing or treating a disorder associated with aberrant NOVX expression or activity e.g., cancer, hypertension, atherosclerosis, cardiomyopathy or bronchial
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2001US-0333184P.
2001US-03320972P.
2001US-0337426P.
2001US-0338092P.
2001US-0338092P.
2001US-034185P.
                                                                       2002US-00092900
                                                                                                                                            Casman SJ, 1
Catterton E,
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Gusev V,
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                                                                                                            Padigaru M, Sp.
Zerhusen BD, G
Patturajan M,
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Spaderna SK,
                                                 04-DEC-2001;
03-JAN-2002;
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                    21-NOV-2001;
          14-NOV-2001;
                              03-DEC-2001;
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The invention relates to isolated polymucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polymucleotides are also used in diagnostics as expressed sequence tags for identifying expressed control of (II) as useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein espression or biological activity. The colypeptide and polymucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations of and to produce other types of data and products dependent on DNA and amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic and to produce other types of data and products dependent on DNA and amino acid sequences of the invention. Note: The sequence data for this patent did not appear in the printed specification, but was obtained in coly the sequences of the anno acid sequences of the anno acid sequences of the invention.

The product of the appear in the printed specification, but was obtained in color the product of products dependent on the printed specification, but was obtained in the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of the print of t
497 PE----AGPLSVLSANKRWTPPRSIRFTAEEGDLGFTLRGNAPVQVHFLDPYCSASVAGA
                                                                                                                                                                      PDIFHRIGPLSVFSAKNRWRLVGPVHLTRGEGGFGLTLRGDSPVLIAAVIPGSQAAAAGL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder.
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23-AUG-2000; 2000US-00649167.
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                                        110 LYRATSNNRVRETVALELSYVNSNLQLLKEELEELSGGVDPGRHGSEAVTVPMIPLGLKE 169
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                                                                                             RAILGOEFALRLHALCRVLREVDLLRAVI SQTLORSLAKYAELDREDDFCEAAEAPDIQP
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                                                                                 170 TKELDWSTPLKELISVHFGEDGASYEAEIRELEALROAMRTPSRNESGLELLTAYYNQLC
                                                                                                                         PLDARFLTPARSLGLFFHWYDSLTGVPAQQRALAFEKGSVLFNIGALHTQIGARQDRSCT
                                                                                                                                                                EGARRAMEAFORAAGAFSLIRENFSHAPSPDMSAASICALEQIMMAQAQECVFEGISPPA
                                                                                                                                                                                                        SMAPQDCLAQLRLAQEAAQVAAEYRLVHRTMAQPPVHDYVPVSWTALVHVKAEYFRSLAH
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                    50;
Length 1111;
26.7%; Score 1007; DB 4; Length 1
39.7%; Pred. No. 4.9e-86;
ive 99; Mismatches 212; Indels
                                                     Prostate cancer-associated protein #137
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2000US-00733742.

2001US-00733742.

2001US-0263957P.

2001US-0276791P.

2001US-0276988P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABG61936 standard; protein;
                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first
           al Similarity
238; Conserv
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16-MAR-2001;
06-APR-2001;
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08-DEC-2000;
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Best Local
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The present invention relates to methods of detecting a prostate cancerassociated transcript in a cell from a patient. The method comprises contearing a biological sample from the patient with prostate cancerassociated polymuclectides (designated PC genes) that selectively hybridise to a sequence that is at least 80% identical to them. The prostate cancer-associated polymuclectide sequences are differentially expressed in prostate tumour tissue or in prostate cancer and are useful from the tissues of various organisms such as humans or other mammals (e.g. mice, sheep and dogs). The methods of the invention are useful for diagnosing and treating prostate cancer in mammals. The prostate cancer associated genes are useful for diagnosing or treating prostate cancer, as well as for identifying modulators of prostate cancer or agents that in bit prostate cancer. The nucleic acid sequences are particularly useful in gene therapy, as a vaccine or in antisense applications.

ABG61800-ABG61944 represent prostate cancer-associated proteins
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                                                                                                                                                                           Detecting a prostate cancer-associated transcript in a cell in a patient, useful for diagnosing prostate cancer (PC) or screening modulators of PC, by determining if prostate cancer-associated genes are expressed in a
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420 -SPATEGELPTHEQVFLQPPTSSKPRG--PVLP-QELEERRQLGKAHLKRALLGQEEALR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RLSQGKGPDIFHRLGPLSVFSAKNRWRLVGPVHLTRGEGGFGLTLRGDSPVLIAAVIPGS
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Pred. No. 3.5e-83;
Mismatches 171; Indels
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3.5e-83;
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2001US-0286214P.
2001US-00847046.
2001US-0288589P.
                                                                   (EOSB-) EOS BIOTECHNOLOGY INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25.8%;
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                                                                                                                                 2002-471335/50.
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                                                                                                   Mack DH,
                                                                                                                                                N-PSDB; ABK92255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 556 AA;
                                                                                                                                                                                                                                prostate tissue
      24-APR-2001;
                     30-APR-2001;
                                   04-MAY-2001;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL16176-ABL30511), expressed DNA ABB72072). The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                             New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signaling and cell-cell
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                                                                                                                              developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
21.6%; Score 817; DB 4; Length 648;
Best Local Similarity 31.7%; Pred. No. 2.9e-68;
Matches 215; Conservative 114; Mismatches 233; Indels 116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; SEQ ID NO 18429; 21pp + Sequence Listing; English
                                                                                                  Drosophila melanogaster polypeptide SEQ ID NO 18429
                                                                                                                                                                                                                                                                                                                                                                        EM.
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             ABB63879 standard; protein; 648 AA.
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11-JUL-2000; 2000US-00614150.
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                                                                       (first entry)
                                                                                                                                                                           Drosophila melanogaster
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N-PSDB; ABL07982.
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WTALVHVKAEYFRSLAHYHVAMALCDGSPATEGELPTHEQVFLQPPTSSKPRGPVLPQEL 452
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                                                                                                                                                                                                 633
                                                               493 ISQTLQRSLAKY----AELDREDDFCEAAEAPDIQPKTHQKPEARMPRLSQGKGPDIFH
                                                                                                                                                            AGASLQVVSLLPSSRLPSLGDRRPVLLGPRGLLRSQREHGCKT--PASTWASPRPLLNWS
                                                 --AHLKRAILGOEEALRLHALCRVLRE----VDLLRAV
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| cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*
| cgn2_6/ptodata/1/pubpna/BCT_NEW_PUB.seq:*
| cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
| cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*
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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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2169
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Maximum Match 1008
Listing first 45 summaries
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Maximum DB seq length: 200000000
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		Description	Semience 1 semiel	Segmence 1 Appli	1:	· -	Semience 1202	Semience 1233, Ap	Semience 13, Appl	Semience 1/4, App	Sociones 43, Appr	Semience 330, App	Seguence 32, Appl	Segmence 31, Appl	Semience 331, App	Sequence 2397, Ap	1144
		ar	US-10-697-266-1	US-10-274-878-1	US-10-451-207-11	US-10-112-944-74	US-09-833-381-1293	US-10-023-896-15	US-09-925-301-174	US-10-023-896-43	IIS-10-112-944-558	US-10-239-607-52	US-10-239-607-51	US-10-092-900A-351	US-10-108-260A-2397	US-09-895-040A-2	
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		Match Length DB	2469	2469	2837	2738	1155	1013	1013	1013	1046	2100	3526	2109	3500	2061	
*	Query	Match	100.0	100.0	89.9	89.2	36.3	36.0	36.0	36.0	24.2	22.9	22.9	22.8	22.8	22.7	
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1 ATGATCCTGGAGGAGGCCGGACGGCGCGCGCCGGCGAGGAGGAGACCCCGCGCGCTGCAG

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Query Match

Query Match

Best Local Similarity 100.0%; Pred. No. 0;

Matches 2169; Conservative 0; Mismatches 0; Indels 0;

61 ATAICTAGGAGAAAACCCAGGAAAAACACGTGTGAGCTCTTTACGGGGAAGACGGGAAAG

	Sequence I, Appli	Segretary	Semience	Sequence	Sequence	Sequence		Seguence	Seguence	Sequence	Sednence	Sequence	ouanhas	Segrences		Sedimen	Sequenc	Sequence 14, Appl		Seguence	Sequence		Sequence	Sequence 124	zequence 1,	44-74 Seguence 1,	07-11 Semience 74,	53-5166 Seguence 5166	S							NOCLEIC	NG HUMAN KINASE PROTEINS, AND USES															
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ω >	2023	GTGTCGCTGCTGCTGCTCTAGGCTGCCCAGGTGCTGGGGGGGCGCGGGGGGGG
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ð	2143	HGGGCCAGTCCCCGGCCCCTCCTCAACTGGAGCCGAAAGGCCCAGCAGGGCAAGACTGGA 2202
ž:	2101	GGCTGCCCCCAGCCCTGTGCCCCCAGTGAAGCCAGCTCCGCCCTCATCCTTGAAGCACCCCA 2160
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λ.	2161	GGGTGGCCG 2169
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GENERAL INFORMATION: APPLICANT: RUSCH, Douglas et al TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES; TITLE OF INVENTION: THEREOF TITLE OF INVENTION: THEREOF TITLE OF INVENTION: THEREOF TITLE OF INVENTION: THEREOF TITLE OF INVENTION: THEREOF CURRENT APPLICATION NUMBER: US/10/274,878 CURRENT FILING DATE: 2002-10-22 PRIOR FILING DATE: 2001-05-07 PRIOR FILING DATE: 2001-02-01 NUMBER: OF 9/773,371 PRIOR FILING DATE: 2001-02-01 NUMBER: OF Windows Version 4.0 SEQ ID NO 1 LENGTH: 2469 TYPE: DNA CREATED HUMAN CREATED H	Query Match 100.0%; Score 2169; DB 15; Length 2469; Best Local Similarity 100.0%; Pred. No. 0; No. 0; Added to the state of th	AAGGC TGCGT TGCGT	181 GTCCAGTTGGCCCATGAATCCGCAGCTTCATGCAGTGGGCTGTCACTCAC	301 CTGCAGATGCGGACGGGCTGAGAACCTCTACAGAGCCACCAGCAACCGGGTGAGA 360	CTGGAGGAGCTCAGCGGTGGCCTGGCCGGCATGGAGGAGGAAGCTGTCTGT		601 CTGGAGGCCCTGCGGCAGGCCATGCGGACCGGGAATGAGTCGGGCCTGGAGCTG 660	GCGT

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; OTHER INFORMATION: Incyte ID No. US20040038267A1 5560161CB1
US-10-451-207-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: DUNG, Li
APPLICANT: DUNG, Li
APPLICANT: THORYNON, Michael B.
APPLICANT: THORNTON, Michael B.
APPLICANT: GANDHI, Ameena R.
APPLICANT: GANDHI, Ameena R.
APPLICANT: GANDHI, Ameena R.
APPLICANT: BAUGHN, Mariah R.
APPLICANT: BAUGHN, Mariah R.
APPLICANT: BAUGHN, Brendan M.
APPLICANT: DUGGAN, Brendan M.
APPLICANT: U. Dyung Aina M.
APPLICANT: TANGAVELU, Kavitha M.
APPLICANT: TANGAVELU, Kavitha M.
APPLICANT: TANGAVELU, Kavitha M.
APPLICANT: TANGAVELU, Kavitha M.
APPLICANT: TANG, Y. Tom
APPLICANT: YAO, Monique G.
APPLICANT: EMERING, Brooke M.
ITLE OF INVENTION: TRYRACELULAR SIGNALING
TITLE OF INVENTION: TRYRACELULAR
FILIR DATE: 2003-06-18
PRIOR APPLICATION NUMBER: US 60/250,102
PRIOR PILING DATE: 2001-12-19
PRIOR PILING DATE: 2001-12-12
PRIOR APPLICATION NUMBER: US 60/260,102
PRIOR FILING DATE: 2001-01-05
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PERL PROGRAM
SEG ID NO 11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: INCYTE GENOMICS, INC
APPLICANT: BURFORD, Neil
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ORGANISM: Homo sapiens
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Wang, Jian-Kun
Wehrman, Tom
Ghosh, Malabika
Wang, Dunrui
: Zhao, Qing A.
: Wang, Zhiwei
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                                   GGAGCGCAGGCAGGCAAGGCACACCTGAAGCGTGCCATCCTGGGGCAGGAGGAGGC
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### APPLICANT: Wehrman, Tom
### APPLICANT: Wehrman, Tom
#### APPLICANT: Wehrman, Tom
#### APPLICANT: Wehrman, Tom
##### APPLICANT: Wang, Dunrui
#### APPLICANT: Wang, Dunrui
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#### APPLICANT: Wang, Dunrui
#### APPLICANT: Wang, Dunrui
#### APPLICANT: Wang, Dunrui
#### APPLICANT: Wang, Dunrui
#### TITLE OF INVENTION: Secreted Polypeptides
#### TITLE OF INVENTION: Secreted Polypeptides
#### TITLE OF INVENTION: Secreted Polypeptides
#### CURRENT APPLICATION NUMBER: US 09/494, 404
#### PRIOR FILING DATE: 2000-01-21
#### PRIOR PELING DATE: 2000-02-08
### PRIOR PELING DATE: 2000-02-08
### PRIOR PELING DATE: 2000-03-07
### PRIOR PELING DATE: 2000-03-07
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### PRIOR PELING DATE: 2000-04-18
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99.8%; Pred. No. 0;
iive 0; Mismatches
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Best Local Similarity 99.8
Matches 1948; Conservative
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; LOCATION: (103)..(2109)
US-10-112-944-74
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ORGANISM: Homo sapiens
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Sequence 74, Application US/10112944;
Publication No. US20040048249A1;
GENERAL INFORMATION:
APPLICANT: Tang, Y. Tom
APPLICANT: Wang, Yonghong;
APPLICANT: Anng, Yonghong;
APPLICANT: Anng, Jie
APPLICANT: Anng, Jie
APPLICANT: Ren, Feiyan;
APPLICANT: Re, Aidong J.

0y 1779 AGGGAGCCAGGCGGCCTGAAGGAGGCGACTACATTGTGTCAGTGAATGG 1838 0y 1719 AGGGAGCCAGGCCGGCGCTGAAGGAGGCGACTACATTGTGTCAGTGAATGG 1778 0y 1839 GCAGCCAGGCCGGCGCGCGCGAGGCTGAAGGCCTGAAGGCTGAAGGCTGAAGGCTGAAGGCTGAAGGCTGAAGGCTGAAGGCTGAAGGCTGAAGGCTGAAGGCTGCAGGAGA 1838 0y 1839 GCAGCCATGCAGGTGGTGGAGCCGGAGGTGACGGAGCTGAAGGCTGCAGGAGA 1838 0y 1839 GCAGCCATGCAGGTGGTGGAGCTGCTGCCGAGCTGAAGGCTGCAGGAGAGA 1838 0y 1839 GCAGCCCAGCCTGCAGGTGGTCGCTGCCCGAGCTCTAAGACTGCCCAGCTTGGG 1958 0y 1839 GCGGGCCCAGCCTGCAGGTGGTGGTCGCTGCTGCCCAGCTCTAAGACTGCCCAGCTTGGG 1898 0y 1959 GGACCGCCCGCCCTGCAGGTGGTCGCTGCTGCTGCCCAGCTCTAAGACTGCCCAGCTTGGG 1958 0y 1959 GGACCGCCGCCCGGCCCTGCTGGGCCCCTGCTGCCCCAGGGGGCTTTGGG 1958 0y 1899 GGACCGCCGGCCCGGCCCTGCTGGGCCCCTCCTAAGGAGCCATGGAGGGCCATGGGAGAGCTGTGGCCCCAGGGGGCTTTGGGCCCAGGGGGCTTTGGGCCCAGGGGGCCTTGTGGCCCCAGGGGGCCTTGTGGCCCCAGGGGGCCTCCCCAGGGGGCCATGGAGGCCCCCCCC	RESULT 5 US-09-833-381-1293 105-09-833-381-1293 105-09-833-381-1293 105-09-833-381-1293 105-09-833-381-1293 105-09-833-381-1293 105-09-833-381-1293 105-09-09-833-381 105-09-09-99-10-10-10-10-10-10-10-10-10-10-10-10-10-	Query Match 36.3%; Score 787; DB 9; Length 1155; Best Local Similarity 99.4%; Pred; No. 1.58-182; Matches 790; Conservative 0; Mismatches 5; Indels 0; Gaps 0; Oy 1375 GGCAAGGCACCCTGAAGGCGCATCCTGGGGAGGAGGAGGAGGAGGAGGAGGAGGAGGCTGCACGC 1434 Oy 1435 GGCAAGGCACCTGAAGGCATCCTGGGACTGCTGGAGGAGGAGGAGGAGGCGTGCACGC 192 Oy 1435 CTGTGCGCGTCTGCGGAGGTGCATCTTGGGGCTGTGATCTCCCAGACGCTGCACGC 192 Db 193 CTGTGCGCGTCTGCTGGAGGTGCATCTTCGGGCTGTGATCTCCCAGACGCTGCACGC 192 Oy 1495 CGCTCACTGGCGAGGTGGACTGGTTTCGGGCTGTGATCTCCCCAGACGTGCACGCTGCAGG 1554 Oy 1495 CGCTCACTGGCCAAGTATGCGGAGCTCGACCTGATGATCTTCTGTGAGGTTGCCGAGG 1554 Db 253 CCCCCACCGGCCAAGTATGCGGAGTTCGACGATGAGCTCTTTTGTGAGGCTGCCGAGG 1554 Oy 1555 GCCCCACCGGCCAAGTATGCGGAGTTCGACGATCTTTTTGTAGGCTGCCGAGG 1572 Db 313 GCCCCCGGACATTCCACCAAAGACCCACAAAGCCCAGGATGCCACGGTTGCCGAGGTTGCTGTCC 1614 Db 313 GCCCCCGGACATTCCACCAAAAGCCACAAAGGCCAGGATGCCACGCTGTCC 1614 Db 313 GCCCCGGACATTCCAAAAACCCACCAAAAGCCAAGAGCCACGGATGCCACGCTGTCC 1614
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Patent No. US2002005230BA1

GENERAL INFORMATION:

TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies

FILE REFERENCE: PA106

CURRENT APPLICATION NUMBER: US/09/925,301

CURRENT FILING DATE: 2001-08-10

PRIOR APPLICATION NUMBER: PCT/US00/05882

PRIOR APPLICATION NUMBER: PCT/US00/05882

PRIOR APPLICATION NUMBER: 60/124,270

PRIOR FILING DATE: 1999-03-12

NUMBER OF SEQ ID NOS: 1694

SOFTWARE: PatentIN Ver. 2.0

SEQ ID NO 174

LENGTH: 1013
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TITLE OF INVENTION: 29 Human Cancer Associated Proteins
FILE SPERENCE: PA004P1

CURRENT APPLICATION NUMBER: US/10/023,896

CURRENT FILING DATE: 2001-12-21

PRIOR PILING DATE: 2001-12-21

PRIOR PILING DATE: 2000-08-30

PRIOR PILING DATE: 2000-08-30

PRIOR PILING DATE: 2000-08-30

PRIOR PILING DATE: 1999-09-03

PRIOR FILING DATE: 1999-10-06

NUMBER OF SEQ ID NOS: 138

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 15

LENGTH: 1013
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; Sequence 15, Application US/10023896
; Publication No. US2030027776A1
; GENERAL INFORMATION:
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CORGANISM: Homo sapiens
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                                Length 1013;
                                                       Indels
                                Score 779.8; DB 9;
Pred. No. 8.8e-181;
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ORGANISM: Homo sapiens
                                Query Match
Best Local Similarity
Matches 792; Conserv
           US-09-925-301-174
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RESULT 8
15-10-023-896-43
Sequence 43, Application US/10023896
Publication No. US20030027776A1
GENERAL INFORMATION:
APPLICANT: Victor Roschke
TITLE OF INFENTION:
TITLE OF INFENTION:
FILE REPERENCE: PA004P1

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2095 ACTGGAGGCTGCCCCCAGCCCTGTGCCCCAGTGAAGCCAGCTCCGCCCTCATCCTTGAAG 2154
747 ACTGGAAGGTG-CCCCAGCCCTGTGCCCAGTGAAGCCAGCTCCGGCCTCATCATGAAG 805
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Pred. No. 8.8e-181;
0; Mismatches 2;
CURRENT APPLICATION NUMBER: US/10/023,896
CURRENT FILING DATE: 2001-12-21
PRIOR APPLICATION NUMBER: unassigned
PRIOR FILING DATE: 2001-12-21
PRIOR APPLICATION NUMBER: PCT/US00/23794
PRIOR PILING DATE: 2000-08-30
PRIOR PILING DATE: 1090-09-03
PRIOR FILING DATE: 1990-09-03
PRIOR FILING DATE: 1999-10-06
PRIOR PILING DATE: 1999-10-06
NUMBER OF SEQ ID NOS: 138
SOFTWARE: Patentin Ver: 2.0
SEQ ID NO 43
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792; Conserv
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Sequence 52, Application US/10239607
Publication No. US20030219761A1
GENERAL INFORMATION:
GENERAL INFORMATION:
TAPLICART: Statcioglu, Fahri
TITLE OF INVERTION: Testis-Specific Nucleic Acid Molecules, Polypeptides, and
TITLE OF INVERTION: Diagnostic and Therapeutic Methods
TITLE OF INVERTION: Diagnostic and Therapeutic Methods
TITLE OF INVERTION: Diagnostic and Therapeutic Methods
FILE REFERENCE: 50218/03302
GURRENT APPLICATION NUMBER: US/10/239,607
GURRENT FILING DATE: 2002-09-24
PRIOR FILING DATE: 2001-03-23
PRIOR FILING DATE: 2001-03-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 52
TYPE: DAA
TYPE: DAA
TYPE: DAA
TYPE: DAA
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CTACATTGTGTCAGTGAATGGGCAGCCATGCAGGTGGAGACACGCGGAGGTGGTGAC 463
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APPLICANT: Wang, Yonghong
APPLICANT: Wang, Yonghong
APPLICANT: Wang, Gezhi
APPLICANT: Ren, Feiyan
APPLICANT: Ren, Feiyan
APPLICANT: Wang, Jian-Rui
APPLICANT: Wang, Jian-Rui
APPLICANT: Wang, Jian-Rui
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Dunrui
APPLICANT: Wang, Secreted Polypeptides
TITLE OF INVENTION: No. US20040048249Ale1 Nucleic Acids and
TITLE OF INVENTION: No. US20040048249Ale1
TITLE OF INVENTION: No. US20040048249Ale1
TITLE OF INVENTION: No. US20040048249Ale1
TITLE OF INVENTION: NO. US20040048249Ale1
TITLE OF INVENTION: NO. US200400488, 725
FRIOR APPLICATION NUMBER: US 09/496, 914
PRIOR FILING DATE: 2000-01-25
FRIOR APPLICATION NUMBER: US 09/519, 705
FRIOR APPLICATION NUMBER: US 09/519, 705
FRIOR APPLICATION NUMBER: US 09/519, 705
FRIOR APPLICATION NUMBER: US 09/520, 217
FRIOR APPLICATION NUMBER: US 09/552, 929
FRIOR FILING DATE: 2000-03-31
FRIOR FILING DATE: 2000-03-31
FRIOR FILING DATE: 2000-03-31
FRIOR FILING DATE: 2000-03-31
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FRIOR FILING DATE: 2000-03-31
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Pred. No. 2.7e-118;
0; Mismatches 5;
                                                                                                                                                                                                                       Sequence 558, Application US/10112944
Publication No. US20040048249A1
GENERAL INFORMATION:
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OTHER INFORMATION: n = a,t,c or g
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Best Local Similarity 99.1%;
Matches 527; Conservative
                                                                            CACCCAGGGTGGCCG 820
                                CACCCAGGGTGGCCG
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NAME/KEY: misc_feature
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ORGANISM: Homo sapiens
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APPLICANT: Saatcioglu, Fahri
TTLEO FO INVENTION: No. US2030219761Alel Prostate-Specific or
TITLEO FO INVENTION: D. US2030219761Alel Prostate-Specific or
TITLE OF INVENTION: Diagnostic and Therapeutic Methods
TITLE OF INVENTION: Diagnostic and Therapeutic Methods
FILE REPERRORE: 50218/003002
CURRENT APPLICATION NUMBER: US/10/239,607
CURRENT FILING DATE: 2002-09-24
PRIOR PAPLICATION NUMBER: PCT/US01/09410
PRIOR FILING DATE: 2001-03-23
PRIOR FILING DATE: 2001-03-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: FastSEQ for Windows Version 4.0
                                                   CCTGTCTGTGTTCTCAGCCAAGAACCGGTGGCGGCTGGTGGGGCCCGTCCACCTGACCCG 1712
  CATTATATTGCCCCAGTTCTCCAAGCTGACAGTCACGGACTTCTTCCAGAAGCTGGGCCC 1502
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Pred. No. 1.5e-111;
0; Mismatches 731;
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Best Local Similarity 56.8%;
Matches 977; Conservative
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US-10-239-607-51
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         TACCCATACTCCAAGTTACGACATGAGCCCTGCCATGCTCAGCGTGCTCGTCAAAATGAT
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GENERAL INFORMATION:
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PRIOR FILING DATE: 2001-09-27
PRIOR APPLICATION NUMBER: USSN 60/304,354
PRIOR PILING DATE: 2001-07-10
PRIOR PILING DATE: 2001-03-30
PRIOR PLILING DATE: 2001-03-30
PRIOR FILING DATE: 2001-05-31
PRIOR FILING DATE: 2001-05-31
PRIOR PLILING DATE: 2001-05-31
PRIOR PLILING DATE: 2001-04-30
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 768
SEQ ID NO 351
LENGTH: 2109
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Pred. No. 3.6e-111;
0; Mismatches 732; Indels
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Best Local Similarity 56.75
Matches 976; Conservative
                                                                                                                                                                                                              TYPE: DNA ORGANISM: Homo sapiens
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                                                                                                                                                                                                                                          FEATURE:

NAME/KEY: CDS

LOCATION: (11).

US-10-092-900A-351
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; GENERAL INFORMATION:
APPLICANT: Shannon, Mark
; APPLICANT: Ji, Yonggang; TITLE OF INVENTION: HUMAN GTP-RHO BINDING PROTEIN 2; FILE REFERENCE: AEOMICA-11; CURRENT APPLICATION NUMBER: US/09/895,040A; CURRENT RILING DATE: 2001-06-29; PRIOR APPLICATION NUMBER: PCT/US01/00666
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APPLICANT: HELIX RESEARCH INSTITUTE
TITLE OF INVENTION: No. US20040005560Alel full length cDNA
FILE REFERENCE: H1-A0106
CURRENT APPLICATION NUMBER: US/10/108,260A
CURRENT PILING DATE: 2002-03-27
NUMBER OF SEQ ID NOS: 5458
SEQ ID NO 2337
LENGTH: 3500
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Pred. No. 3.7e-111;
0; Mismatches 732;
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Pred. No. 8.9e-111;
0; Mismatches 733;
PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/US01/00667
PRIOR FILING DATE: 2001-01-30
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PRIOR FILING DATE: 2001-05-23
NUMBER: OF EQ. ID NOS: 180
SECTION NO
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Best Local Similarity 56.7%;
Matches 975; Conservative
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Pred. No. 9e-111;
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GENERAL INCORMATION;
APPLICANT: Shannon, Mark
APPLICANT: Ji, Yonggang
TITLE OF INVENTION: HUMAN GTP-RHO BINDING PROTEIN 2
FILE REFERENCE: AEOMICA-11
CURRENT APPLICATION NUMBER: US/09/895,040A
CURRENT APPLICATION NUMBER: DCT/US01/00666
PRIOR APPLICATION NUMBER: PCT/US01/00667
PRIOR APPLICATION NUMBER: PCT/US01/00667
PRIOR APPLICATION NUMBER: PCT/US01/00669
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ORGANISM: Homo sapiens
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                                                                                                     /cell type="HELA"
/cell_line="HELA"
/clone_lib="HELA"
/clone_lib="Homo sapiens HELA CELLS COT 25-NORMALIZED"
/note="Ist strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
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9; Mismatches 8; Indels 1;
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 Avenue Genoscope sequence
                                    organism="Homo sapiens"
                                                         /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CS0DK004YE05"
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Contact: Robert Strausberg, Ph.D.

Email: cgapbs-remail.nih.gov
Tissue Procourement: Life Technologies, Inc.

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information

clone distribution: MGC.E. Consortium/LLNL at:

found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llh.gov
Plate: LLAM12810 row: b column: 21

High quality sequence stop: 623.
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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National Institutes of Health, Mammalian Gene Collection (MGC)
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ilarity 96.4%; Pred. No. 1.2e-128;
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Bukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1135)
Strausberg, R.L., Feingold, B.A., Grouse, D.H., Derge, J.G.,
Alasher, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.,
Villalon, D.K., Muzny, D.M., Sodergren, B.J., Lu, X., Glbbs, R.A.,
Fahey, J., Helton, B., Ketteman, M., Madan, A., Rodrigues, S.,
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Homo sapiens rhophilin, Rho GTPase binding protein 1, mRNA (cDNA clone IMAGE:4555079), with apparent retained intron.
                                                                                                                                    CTACGAGGCAGAAATCAGGGAGCTGGAGGCCCTGCGGCCAGGCCATGCGGACCCCCAGCCG
                                                                                                                                                                                                      CTACGAGGCAGAAATCAGGGAGCTGGAGGCCCTGCGGGCAGGCCATGCGGACCCCCAGCCG
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                                   TGGGAGCGAAGCTGTCACTGTCCCCATGATCCCCCTGGGCCTGAAGGAGGACCAAGGAGCT
                                                                       TGGAGCGAAGCTGTCACTGTCCCCATGATCCCCTGGGCCTGAAGGAGCAAGGAGCT
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Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAL Plate: 29 Row: d Column: 17
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 19882236 This clone has the following problem: retained intron.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               info@bcgsc.bc.ca
Steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butterfield,
Susanna Chan, Readman Chiu, Chris Fjell, Erin Garland, Ran Guin,
Letticia Hsiao, Martin Krzywinski, Reta Kutsche, Oliver Lee, Soo
Sen Lee, Victor Ling, Carrie Mathewson, Candice McLeavy, Steven
Ness, Pawan Pandoh, Anna-Liisa Prabhu, Parvaneh Saeedi, Jacqueline
Schein, Duane Smallus, Michael Smith, Lorraine Spence, Jeff Stott,
Michael Thorne, Miranada Tsai, Natasja van den Bosch, Jill Vardy,
George Yang, Scott Zuyderduyn, Marco Marra.
                 Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
Schmerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
Generation and initial analysis of more than 15,000 full-length
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                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (02-AUG-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACCAGCAACAACGGGTGAGAGAGGGTCGCCCTGGAGCTGAGCTACGTCAACTCCAA
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Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
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CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL)
DNA Sequencing by: Genome Sequence Centre,
BC Cancer Agency, Vancouver, BC, Canada
                                                                                                                                                                                                                                Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
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/tissue type="Uterus, leiomyosarcoma"
/clone_lib="NIH MGC.46"
/lab_host="DH10B-R"
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Conteat: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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/db xref="taxon:9606"
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Strausberg, R.
Direct Submission
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection MGC)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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/mol_type="mRNA"
/db_xref="taxon:9606"
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/tissue_type="retinoblastoma"
/lab_bost="DH10B [phage-resistant)"
/clone=lb="WILH MGC 67"
/note="Organ: eye; Vector: pCMV-SPORT6; Site 1: Not!;
site 2: Sall; cloned unidirectionally. Primer: Oligo Average insert size 1.75 kb. Library constructed by Technologies."
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                                                                                                                                                                           Score 787.6; DB 13; Length
Pred. No. 4e-126;
0; Mismatches 9; Indels
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2032

279

2092

2152

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/db_ox="cxxon:9606"

/clone="Cxxon:96001xD09"

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/cell_line="UpurkAT_CELL_LINE"

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/clone="Vector: pCMYSPORT_6; lst strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoxY sites of the pCMYSPORT 6 vector.

Library was not normalized."
                                      1793 CGCCGCCTGGAGGAGGAGGCGACTACATTGTCTCAGTGAATGGGCAGCCATGCAGGT 1852
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1201 bp mRNA linear EST 22-MAY-2003
BX447754 Homo sapiens T CELLS (JURKAT CELL LINE) Homo sapiens CDNA
clone CSODH001XD09 3-PRIME, mRNA sequence.

BX447754
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Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
BMail: Sequenceope.ons.fr, Wab : www.genoscope.ons.fr
was not normalized. Library was constructed by Life Technologies,
division of Invitrogen. This sequence belongs to sequence cluster
AT5.f. For more information about this cluster, see
http://www.genoscope.ons.fr/
cgi-bin/cluster.cgi?seq=CSOAH001CBO5NP1&cluster=4751.f. Contact :
Feng Liang Email : fliang@lifetech.com URL :
http://wllllength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CSOAH001CBO5NP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
When very metacoa, Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1201)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    518 CGCCGCCTCGAAGCACCCACTACATTCTCTCAGTCAATGCCCAGCCATCCAGGT
                                                                                                                                                                                     458 GGTGGAGACACGCGGAGGTGACGGAGCTGAAGGCTGCGGGAGAGACGCGGGCGCCAGCC
                                                                                                                                                                                                                                                                                                                                      1973 TCCTGCTGGGCCCCCAGGGGCTTCTAAGGAGCCAGAGGAAGCATGGTTGCAAGACCCCGG
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Contact: Genoscope,
Contact: Genoscope
Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
BRail: seqref@genoscope.nns.fr, Www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 4751.f For
more information about this cluster, see
http://www.genoscope.nns.fr/
cgi.bin/cluster.cgi?seq=CSODN004CD07NPl&cluster=4751.f. Contact :
Feng Liang Email: fliang@lifetech.com URL:
http://fullength.invitrogen.com/ InvitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CSODN004CD07NPl.
BX444630 1000 sapiens ADULT BRAIN Homo sapiens cDNA clone CSODN004YHI3 3-PRIME, mRNA sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1493 AGCGCTCACTGGCCAAGTATGCGGAGCTCGACGTGAGGATGACTTCTGTGAGGCTGCCG 1552
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                                                                                                                                                                                                    Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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                                                                                                                                                                                                                                                1 (bases 1 to 1017)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Unpublished (2001)
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                                                                        BX444630
BX444630.1 GI:30778254
                                                                                                                                                   Homo sapiens (human)
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Best Local Similarity 99.6
Matches 794; Conservative
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Contact: Genoscope
Genoscope - Centre National de Sequencage
Genoscope - Centre National de Sequencage
Genoscope - Centre National Genoscope.cns.fr
Email: seqref@genoscope.cns.fr, Web : www.genoscope.cns.fr
Initrary was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 4751.f For
more information about this cluster, see
http://www.genoscope.cns.fr/cgi-bin/cluster.cgi?seq=CSODK004AC03QP1
gcluster=4751.f. Contact: Feng Liang Email: fliang@lifetech.com
URL : http://fullength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID: CSODK004AC03QP1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                   /cell_type="HELA"
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primer. Five prime end enriched, double strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
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              1 (bases 1 to 1127)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
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                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
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Best Local Similarity 95.59
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                                                                                                                                                                                                                                                                                                                                                  CTTCTGTGAGGCTGCCGAGGCCCCGGACATCCAGCCTAAGACCCCACCAGAAGCCACAGAGGC 1595
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                         Length 1201,
                                                                  Indels
                             Score 738.6; DB 13;
Pred. No. 1.4e-117;
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Best Local Similarity 97.8%
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/organism="Homo sapiens"
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/db_xref="taxon:9606"
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/cell_line="HELA"
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/coll ib="HELA CELLS COT 25-NORMALIZED"
/coll ib="Homo sapiens HELA CELLS COT 25-NORMALIZED"
/note="1st strand cDNA was primed with a NotI-olly Qrimer. Flve prime end enriched, double-strand cDNA was primed with Not I and cloned into the Not I and Ecok dispersed with Not I and cloned into the Not I and Ecok sites of the pCMVSPORT 6 vector. Library was normalized."
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                                                                            GCGCCGAGCCCAGACATGAGCGCTGCGTCCCTCTGCGCACTGGAGCAGCTCATGATGGCC 1005
                                                                                                                                                                                 CAGGCCCAGGAATGTGTTTTGAGGGCCTCTCACCACCTGCCTCCATGGCCCCCCAAGAC 1065
                                                                                                                                                                                                                       Craniata, Vertebrata, Euteleostomi,
Catarrhini, Hominidae, Homo.
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BP 191 91006 EVRY cedex - France
BP 191 91006 EVRY cedex - France
BP 191 91006 EVRY cedex - France
BP 191 91006 EVRY cedex - France
Bmail: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 4751.f For
Invitrogen. This sequence belongs to sequence cluster 4751.f For
http://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?seq=CSODK010BG02NP1&cluster=4751.f. Contact
cgi-bin/cluster.cgi?seq=CSODK010BG02NP1&cluster=4751.f. Contact
Feng Liang Email: fliang@lifetech.com URL:
http://fulllength.invitrogen.com/ InvitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID: CSODK010BG02NP1.
                                                                                                                                                                                                                                                                                                                    1001 TGCCTGGCCCAGCTGCGC---TGGSGRGAAGGCCGCCARGTGGCAGCCGAGTACAGS 1054
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Ini, W.B., Gruber, C., Jessee, J., and Polayes, D.
Full-length cDNA libraries and normalization
Unpublished (2001)
On Feb 16, 2001 this sequence version replaced gi:12942264.
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llarity 95.7%; Pred. No. 2.2e-112;
Conservative 8; Mismatches 22;
869 ATGGAGGCCTTCCAGAGGGCCGCT
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/note="Vector: PCMVSPORT 6; 1st strand cDNA was trimed

/note="Vector: PCMVSPORT 6; 1st strand cDNA was trimed

with a NotI-oligo(dT) primer. Five prime end entiched,

double-strand cDNA was digested with Not I and cloned into

the Not I and BORNY sites of the pCMVSPORT 6 vector.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGCCCAGCAGCGTGCCCTTCGAGAAGGGCAGCGTTCTCTTCAACATCGG:GCCC 826
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCTGAAGGAGGAGCTGGAGGAGCTCAGCGGTGGCGTGGACCCTGGCCGGCATGG(AGCG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGCTGTCACTGTCCCCATGATCCCCCTGGGCCTGAAGGAGACCAAGGAGCTGGA(TGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTACACCGCTGAAGGAGCTGATCTCAGTGCACTTTGGAGAAGGACGGCGCCTCCTAAGAGG
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                                                                                                             cgi_bin/cluster.cgi7seq=CSOAH001CBO5OP1&cluster=4751.f. Ccntak
Feng Liang Email : fliang@lifetech.com URL :
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CSOAH001CBO5OP1.
  Library was constructed by Life Technologies, a division of Invitrogen. This sequence belongs to sequence cluster 4751.f more information about this cluster, see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1201;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33.0%; Score 715.8; DB 13;
llarity 91.9%; Pred. No. 1.2e-113;
Conservative 6; Mismatches 13; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Library was not normalized.
                                                                                                                                                                                                                                                                              organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                      /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CS0DH001YD09"
                                                                                                                                                                                                                             Location/Qualifiers
                                                                                            http://www.genoscope.cns.fr/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
Matches 824; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         467
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J243 bp mRNA linear EST 12-MAR-2002 AGENCOURT_6699680 NIH_MGC_121 Homo sapiens cDNA clone IMAGE:5770109 BM928275
                                                                                                                         /clone="CSODKOITYMIO"
/cell type="HELA CELLS COT 25-NORMALIZED"
/cell lib="HeLA"
/clone lib="HeLA"
/clone lib="Homo sapiens HELA CELLS COT 25-NORMALIZED"
/note="lst strand cDNA was primed with a NotI-oligo(dT)
primer: Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and BCRV v sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                948 GCCGAGCCCAGACATGAGCGCTGCGTCCTTGCGCACTGGAGCAGCTCATGATGGCCCA 1007
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                                                                                                                                                                                                                                                                                                                                                                                                                                     28.8%; Score 624.4; DB 13; Length 1201; larity 97.3%; Pred. No. 8.2e-98; Conservative 4; Mismatches 11; Indels 3;
                  1. .1201
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
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                                                                                                                                                                                                                                                EST 08-MAY-2003
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Li, W.B., Gruber, C., Jessee, J. and Polayes, D. Full-length cDNA libraries and normalization (2001)
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Contact: Genoscope
Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
Email: seqref@genoscope.cns.fr. Web : www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. Contact : Peng Liang Bmail : filangabilfetech.com URL
http://fulllength.invitrogen.com/ InvitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CSODK011BG05QP1.
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BX384556
CCCCGGACATCCAGCCTAAGACCCAGAAGCCAGAGGCCAGGATGCCACGCCTGTCCC
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/mol_type="mRNA"
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NIH-MGC http://wgc.nci.nih.gov/.

Dupublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ArC

CDNA Library Preparation: Ling Hong/Rubin Laboratory

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/Linl at: image.llnl.gov

Plate: LLCM129 row: n column: 17

High quality sequence stop: 617.

High quality sequence stop: 617.
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 679)
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GII1078TIF1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3344080 5',
BE251330
                  GGACTGCCCTGGTGCATGTCAAGGCCGAGTACTTCCGCTCCCTGGCCCACTACCACGTAG
                                                                     447 GGACTGCCCTGGTGCATGTCAAGGCCGAGTACTTCCGCTCCCTGGCCCACTACCTAG
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Pred. No. 1.1e-94;
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98.1%;
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/clone lib="WHH MGC 121"
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Site_2: EcoRV (destroyed); RNA source anonymous pool of 3 fetal brains, female age 20 weeks, female age 24 weeks, and male age 26 weeks. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.7 kb, insert size range full-length clones and was constructed by C. Gruber (Invitrogem). Research Genetics tracking code 017. Note:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGATGGCCCAGGCCCAGGAATGTGTGTTTGAGGGCCTCTCACCACCTGCCTCCATGGCCC 1057
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                                                                                                                 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 1243)
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                                                                                                                                                                                                                                                                                                                                                                                      CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LINL at:
http://image.llnl.gov
Plate: LiAML2832 row: k column: 06
High quality sequence start: 115
High quality sequence start: 115
Location/Qualifiers
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National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
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Pred. No. 7.2e-96;
0; Mismatches 63; Indels
                                                                                                                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Invitrogen), Research Gene
this is a NIH MGC Library."
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/clone="IMAGE:5770109"
GI:19378654
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28.3%;
Best Local Similarity 90.8%;
Matches 655; Conservative
                                                           sapiens (human)
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                                                                                              Homo sapiens
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POLYA=Yes. Location/Qualifiers 1.775	OMESTIN OMESTIN Dest Local Similarity 9.74; Pred. No. 1.28-88; Matches 593; Conservative 0; Mismatches 0; Indels 2; Gaps 2; Best Local Similarity 9.74; Pred. No. 1.28-88; 1575 GACCACCACAGAGCCAGAGGCCACACCCCTCTCCCAGGGGAGGGCCTGACAT 1634 775 GACCACCACAGAGCCAGAGGCCAGAGCCTCCCCCAGGGGAGGGCCTGACAT 716 1635 GTTCCATCGGCTGGGCCAGAGGCCAGAGCCTCACCAGGCCAGGGCCGTGACAT 716 1655 GCCCGTCCACCCAGGAGGCCAGAGGCCAGAGCCCCAGGCCAGGCCGCTGGCGCGCTGACAT 716 175 GACCACCACCAGGCCAGGAGGCCAGGAGCCCCAGGCCAGGCCGCTGGCGCGCTGCTGGGGGGCGTGGGGGGCGTGGGGGG
Matches 634; Conservative 0; Mismatches 9; Indels 3; Gaps 937 TTCTCCCATGCGCCAGACATGAGCGTCCTTGCGCTTGCGCTTGGGCTGGTCTTGGGCTTGCGCTTGCGCTGGGCTGGTCTTGGGCTTGGGCTGGTTCTTGGGGCTGGGTCTTGGGCTTGGGCTTGGGCTGGTTGTT	0y 1357 dAGGAGCCAGGCAGCTTGCCAAGGCACTCAAAGCTGCACACCCACC

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Search completed: July Job time: 3673.68 secs
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/lab_host="hollow (phage-resistant)"
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ScoRI; cDNA made by oligo-dT priming. Directionally cloned
into EcoRI/KhoI sites using the following 5' adaptor:
GGCAGGAG(G). Size-selected >500bp for average insert size
1.8kb. Library constructed by Ling Hong in the laboratory
of Gerald M. Rubin (University of California, Berkeley)
using ZAP-cDNA synthesis kit (Stratagene) and Superscript
II RT (Life Technologies). Note: this is a NIH_MGC
                                                                                                               BG339711 1067 bp mRNA linear EST 27-FEB-2001 602437292F1 NIH_MGC_46 Homo sapiens cDNA clone IMAGE:4555079 5',
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S NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

L Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: capabbe-remail.nih.gov

Tissue Procurement: ATCC

CDNA Library Preparation: Ling Hong/Rubin Laboratory

CDNA Library Preparation: Ling Hong/Rubin Laboratory

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at:

http://image.llnl.gov

Rlade: LLCM2255 row: h column: 24

High quality: sequence stop: 704.
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                                                                                                                                                                                                                                                                 Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
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Pred. No. 5.4e-86;
0; Mismatches 95;
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/db_xref="taxon:9606"
/clone="IMAGE:4555079"
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llarity 86.7%;
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BG339711
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completed: July 13, 2004, 08:21:02

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Sequence 1, Appli
Sequence 1233, Ap
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Sequence 5965, Ap
Sequence 5902, Ap
Sequence 115, App
Sequence 1153, App
Sequence 1293, Ap
Sequence 1371, App
Sequence 1371, App
                                                                                    July 13, 2004, 00:06:40; Search time 107.561 Seconds (without alignments) 11190.705 Million cell updates/sec
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1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
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GenCore version 5.1.6
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	20000000000000000000000000000000000000	RESULT 1 US-09-849-334 Sequence 1, Patent No. GENERAL INF. APPLICANT: TITLE OF I TITLE OF I TITLE OF I TITLE OF I TITLE OF I CURRENT AP CURRENT	Query Matches 21 Best Local Matches 21 10 22 24 24 40 40

1021 GTGTTTGAGGGCCTCTCACCCTCGCCTCCAGGCCCCCAGGCTG 1080 1123 GTGTTTGAGGGCCTCACCCCCCCCAGCTG 1080 1123 GTGTTTGAGGGCCTCACCCCCCCAGCTG 1182 1182 GTGTTGAGGGCCTCCCCCCCCAGCTG 1182 1183 GGCCTGGCGCAGCGCCCCCCCCAGCTG 1180 1181 GCCCAGCCGCCCCCCCCCGAGCTGCCAGCCCAGCCCAGC	1201 GCCGAGTACTTCCGCTCCCTGGCCCACTACCACGTAGCCATGGCCCTCTGCGACGCTCC 1260	21 TCTAAGCCCCGAGGCCTGTGCTGCCGCAGGGGGGGGGGG		CTGGCCAAGTATGCGGAGCTCGACGTGAGGATGACTTCTGTGAGGCTGCCGAGGCCCCG GACATCCAGCCTAAGACCCACCAGAAGCCAGGATGCCACGCCTGTCCCAGGGG GACATCCAGCCTAAGACCCACCAGAAGCCAGGATGCCACGCCTGTCCCAGGGG GACATCCAGCCTAAGACCCACGAAGCCAGGATGCCACGCTGTCCCAGGGG GACATCCAGCCTAAGACCCACAGAAGCCAGAGGATGCCACGCCTGTCCCAGGGGG	1621 AAGGGCCTGACATCTTCCATCGGCTGGGGCCCCTGTCTGT	CGGGGAGCTCGCCTGTCCTCCTCGTGCCTCTTTCCAGGAGCGCTTTTGGCCTCTTTTBGCCTTTTBGCCTTTTTGGCGGGGGGGG	1801 GGCCTGAAGGAGGGGATTACATTGTGTCAGTGAATGGCCATGCAGGTGGTGGAGA 1860 1903 GGCCTGAAGGAGGCGACTACATTGTGTCAGTGAATGGCCAGCCA	1921 GTGTGGTGCCGAGCTCTAGACTGCCCAGCTTGGGGGACCGCCGGCCCGTCCTGCTG 1980	2083 GCCCCCAGGGGCTTTTTAAGGGCCAGGGGGGCTTGTTTTTTTT
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Query Match 100.0%; Score 2169; DB 4; Length 2469; Best Local Similarity 100.0%; Pred. No. 0; 0; Indels 0; Gaps 0; Matches 2169; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Qy I ATGATCCTGGAGGAGGCGGGGGGGGGGGGGGGGGGGGGG	121 CTGAGAGACGTGTGCGTGGAGAGGGTGTCGGGTCCACAGAGGGGAAGACCCAGTGCGT 	CGCAG AGGAG AGGAG AGGAG	361 GAGACGCCCTGGAGCTGGCTACGTCACTACCACCACCACCACCACCACCAGGGGGGGA 4 361 GAGACGGTCGCCCTGGAGCTACGTCCAACCTCCAACCTGCTGCTGAAGGAGGG 4 463 GAGACGGTCGCCCTGGAGCTGAGCTACGTCCAACCTGCAGCTGCTGAAGGAGGG 5 421 CTGGAAGGTCAGCGGTGAGCTGAACTCCAACCTGCAACCTGCAACAGAAACAACAACAAAAAAAA	523 CTGGAGGAGCTCAGGCGTGAGGCCTGGCCGCCGCATGGGAGCGAAGCTGTCATGTC 48 481 CCCATGATCCCCCTGGAGCCTGAAGGAGCACTGGCTGGCT	541 643 601	Db 703 CTGGAGGCCTGCGGCAGCCAGCCCGAGCCGGAATGAGTCGGGCCTGGAGCTG 762	Qy 721 AGCCTCGGGCTCTTCTTCCACTGGTACGACTCGCTTACTGGGGCTCCCGGCCCAGCAGCGT 780 bb 823 AGCCTCGGCTCTTCTTCCACTGGTACGACTCGCTTACTGGGGGTCCCGGCCCAGCAGCGT 882 Qy 781 GCCCTGGCCTTCGAGAAGGCAGCGTTCTTCAACATCGGTGCCCTCCACACACA		

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US-09-849-334-3

'Sequence 3, Application US/09849334

'Sequence 3, Application US/09849334

'Sequence 3, Application US/09849334

'Sequence 3, Application US/08655

'GENERAL INFORMATION:

'APPLICANT: RUSCH, Douglas et al

'TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, AND USES

'TITLE OF INVENTION: THEREOF

'TITLE OF INVENTION: THEREOF

'TITLE OF INVENTION: THEREOF

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ORGANISM: Human
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          2203 GGCTGCCCCCAGCCCTGTGCCCCCAGTGAAGCCAGCTCCGCCCTCATCCTTGAAGCACCCA 2262
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; Sequence 1293, Application US/0983381
; Sequence 1295, Application US/0983381
; Patent No. 6672186;
; GENERAL INFORMATION:
; APPLICANT: Robison, Keith E.
; TITLE OF INVERTION: No. 6672186e1 Nucleic Acid and Protein Homologs
; TITLE OF INVERTION: No. 6672186e1 Nucleic Acid and Protein Homologs
; CURRENT APPLICATION NUMBER: US/09/833,381
; CURRENT PILING DATE: 2001-04-11
; PRIOR FILING DATE: 2001-02-29
; NUMBER OF SEQ ID NOS: 2050
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 1293
; LENGTH: 1155
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; OTHER INFORMATION: n = A,T,C or G
US-09-833-381-1293
                                                                                                                      2161 GGGTGGCCG 2169
                                                                                                                                                                                          2263 GGGTGGCCG 2271
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NAME/KEY: misc_feature
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Best Local Similarity 51.3;
Matches 158; Conservative
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Best Local Similarity 51.3
Matches 158; Conservative
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TYPE: DNA
ORGANISM: Human
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ORGANISM: Human
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US-10-274-878-1/c
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LENGTH: 2469
                                              US-09-849-334-1
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                            Sequence 3, Application US/10274878

Patent No. 6670163

GENERAL INFORMATION:

TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC

TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS,

TITLE OF INVENTION:

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Patent No. 6500655

GENERAL INFORMATION:
APPLICANT: RUSCH, Douglas et al
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES
TITLE OF INVENTION: THEREOF
FILE REFERENCE: CLOO1099-CIP
FILE REFERENCE: CLOO1099-CIP
CURRENT APPLICATION NUMBER: US/09/849,334
CURRENT PILLIOR DATE: 2001-05-07
NUMBER OF SEQ ID NOS: 4
SOCTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO : SEQ ID NOS: 4
LENGTH: 2469
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Pred. No. 2e-36;
0; Mismatches 10; Indels 88
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; ORGANISM: Human
US-10-274-878-3
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Best Local
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Sequence 1, Application US/10274878

Sequence 1, Application US/10274878

Patent No. 6670163

GENERAL INFORMATION:

TITLE OF INVENTION:

TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES

TITLE OF INVENTION: THEREOF

TITLE OF INVENTION: THEREOF

FILE REFERENCE: CLOO1099-CIP-DIV

CURRENT APPLICATION NUMBER: US/10/274,878

CURRENT APPLICATION NUMBER: 09/849,334

PRIOR FILING DATE: 2001-05-07

PRIOR FILING DATE: 2001-02-01

PRIOR FILING DATE: 2001-02-01

NUMBER OF SEQ ID NOS: 4

SOUTH OF THE NOS: 4
                                                                                                                                   1403
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                                                                                                                                                                                                                                                                                                              1693 CTGGCTTCTGGTGGTCTTAGGCTGGATGTCCGGGGCCTCGGAGCCTCACAGAAGTCAT 1634
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                                                                                                                                                                                    1753 GCCCAGCCGATGGAAGATGTCAGGCCCCTTCCCCTGGGACAGGCGTGGCATCCTGGCCT
                                                                                                                                                                                                                                                   1404 GGGGCAGGAGGCGCTGCGCTGCACGCCCTGTGCCGCGTCCTGCGCGCGAGGTGGACCT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1573 CCCGAAGCAGGTCCACCTCGCGCAGGACGGGCACACAGGCGCACGTGCACGTGCAGCGCCACCTCCT
                                                                     Gaps
                                                                     .,
      Length 2469;
Score 68; DB 4; Length 246
Pred. No. 2.1e-05;
0; Mismatches 150; Indels
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51.3%; Pred. No. 2.1e-05;
tive 0; Mismatches 150; Indels
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NAME/KEY: misc_feature
LOCATION: (32163)..(32163)
OTHER INFORMATION: nucleotide 32163 is a single nucleotide polymorphism which can be
OTHER INFORMATION: A or C
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COTHER INFORMATION: nucleotide 32614 is a single nucleotide polymorphism which can be
OTHER INFORMATION: A or G
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OTHER INFORMATION:
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: Genbank/AC004923
DATABASE ENTRY DATE: 1999-12-21
RELEVANT RESIDUES: (1)..(38653)
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Best Local Similarity 50.7%;
Matches 138; Conservative
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OTHER INFORMATION:
NAME/KEY: misc feature
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LOCATION: (33598)..(34314)
OTHER INFORMATION:
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LOCATION: (34589)..(36404)
OTHER INFORMATION:
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OTHER INFORMATION:
NAME/KEY: exon
                                                                                                                            LOCATION: (31028)..(31747)
OTHER INFORMATION:
NAME/KEY: exon
LOCATION: (31748)..(31841)
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OTHER INFORMATION:
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OTHER INFORMATION:
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OTHER INFORMATION:
NAME/KEY: Intron
.. (31027)
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OTHER INFORMATION:
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OTHER INFORMATION
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LOCTENTION: (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (27645). (276
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OTHER INFORMATION: nucleotide 24941 is a single nucleotide polymorphism which can be
OTHER INFORMATION: T or C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ъб
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OTHER INFORMATION: nuclectide 24801 is a single nuclectide polymorphism which can
OTHER INFORMATION: A or G
         1524 CCGTGAGGATGACTTCTGTGAGGCTGCCGAGGCCCCGGACATCCAGCCTAAGACCCACA 1583
                                                                                            1514
                                                                                                                                                                               1584 GAAGCCAGAGGCCAGGATGCCACGCCTGTCCCAGGGGAAGGGGGCCTGACATCTTCCATCG 1643
                                                                                                                                                                                                                                                                       1513 cerececcadearedeaceerreagrerecerreceaagerecerecerecerecere
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Sequence 1, Application US/09922445

Patent No. 6528268

GENERAL INFORMATION:
APPLICANT: Anchrison, Maria K.
APPLICANT: Rereland, Lars G. T.
APPLICANT: Reneland, Rikard H.
APPLICANT: Readeny Sall I. R.
TITLE OF INVENTION: REAGENTS AND METHODS FOR DETECTION OF HEART FAILURE
FILE REFERENCE: GG126US

CURRENT APPLICATION NUMBER: US/09/922,445

CURRENT FILING DATE: 2001-08-03

NUMBER OF SEQ ID NOS: 51

SOFTWARE: Patentin version 3.1
                                                                         LOCATION: (26157)..(26252)
OTHER INFORMATION:
NAME/KEY: INTron
LOCATION: (26253)..(26401)
OTHER INFORMATION:
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OTHER INFORMATION:
NAME/KEY: exon
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LOCATION: (26402)..(26543)
OTHER INFORMATION:
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LOCATION: (26544)..(27024)
OTHER INFORMATION:
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OTHER INFORMATION:
NAME/KEY: Intron
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                                                                                                                                                                                                                                                                                                                                                                   1644 GCTGGGGC 1651
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: 5'UTR
LOCATION: (1)..(26156)
OTHER INFORMATION:
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LOCATION: (24941)..(24
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OTHER INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 1
LENGTH: 38653
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US-09-922-445-1
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22037 TTCGCCACGAGCGCCAAGAGCAGGCCACGGTCGACGCCTGGCGCTACCGCATCACGTGGA 22096
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                                                                                                                        21977 ACGTGGACGGCGAGGAGCGCGCCGCTTGCCCTGCTCCTTCCCACCCTCGCGAGCT 22036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22211 GGGGGGGGGGGGGTGCTCGCGGGGGGCGAGGCCCACCTGGACGGGGGTC 22270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22271 TCGCCGAGCACCTGCGCCAGGCTTGCGCCGAGACCGCGCCGCCTCGCGGCGTGCTCTCGC 22330
                                                  1151 CCGTCCACGACTACGTGCCTGTCTCCTGGACTGCTGGTGCATGTCAAGGCCGAGTACT 1210
                                                                                                                                                                                                     TCCGCTCCCTGGCCCACTACCACGTAGCCATGGCCTCTGCGACGCCTCCCCAGCGACCG 1270
                                                                                                                                                                                                                                                                                                                                                     1271 AGGGAGAGCTCCCCACGCACGAGCAGGTCTTCCTGCAGCCCCCCCACCTCTTAAGCCCC 1330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1451 GCGAGGTGGACCTGCTTCGGGCTGTGATCTCCCAGACGCTGCAGCTCACTGGCCAAGT 1510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1391 AGCGTGCCATCCTGGGGCAGGAGGCGCTGCGGCTGCACGCCCTGTGCCGCGTCCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22331 recreácecricárica a materica e confecções de recrea de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções de confecções 
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SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/456,837

FILING DATE: 01-JUN-1995

CLASSIFICATION NUMBER: 08/457,205

FILING DATE: 01-JUN-1995

APPLICATION NUMBER: 08/258,261

FILING DATE: 08-JUN-1994

ATONNET/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Schupp, Thomas
APPLICANT: Schupp, Thomas APPLICANT: Ligon, James M.
APPLICANT: Beck, James Joseph
APPLICANT: Hill, Dwight Steven
APPLICANT: Ryals, John Andrew
APPLICANT: Gaffney, Thomas Deane
APPLICANT: Lam, Stephen Ting
APPLICANT: Hammer, Phillip E.
APPLICANT: Uknes, Scott Joseph
TITLE OF INVENTION: Genes for the synthesis of
TITLE OF INVENTION: Genes for the synthesis of
NUMBER OF SEQUENCES: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Elmer, James Scott
REGISTRATION VUMBER: 36,129
REFERRUCE/DOCKET NUMBER: GG 1506/CIP3
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: Ciba-Geigy Corporation
7 Skyline Drive
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-456-837-6
; Sequence 6, Application US/08456837
; Patent No. 5643774
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44.8%; Pred. No. 0.0067;
Live 0; Mismatches 323; Indels 6;
                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Ligon, James M.
APPLICANT: Ligon, James M.
APPLICANT: Beck, James Joseph
APPLICANT: Hill, Dwight Steven
APPLICANT: Ryals, John Andrew
APPLICANT: Gaffney, Thomas Deane
APPLICANT: Lam, Stephen Ting
APPLICANT: Lam, Stephen Ting
APPLICANT: Uknes, Scott Joseph
TITLE OF INVENTION: Genes for the synthesis of
TITLE OF INVENTION: antipathogenic substances
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
UNRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/258,261B
FILING DATE: 08-UUN-1994
CLASSIFICATION: -----
26271 TGCGAGGCGCGGCGTCTGTGGCCAGGG 26302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRICR APPLICATION DATA:

APPLICATION NUMBER: US 08/457,205
FILING DATE: 01-UN-1995
FILING DATE: 01-UN-1995
FILING DATE: 01-UN-1995
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FILING FOR SEQ 1D NO: 6: SEQUENCE CHARACTERISTICS:
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STREET: 7 Skyline Drive
CITY: Hawthorne
                                                                                                                                                                                                                                                                                                                                 Schupp, Thomas
Ligon, James M.
Beck, James Joseph
Hill, Dwight Steven
Ryals, John Andrew
Gaffney, Thomas Deane
                                                                                                                                               RESULT 9
US-08-258-261B-6
F. Sequence 6, Application US/08258261B
Percent No. 5639949
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Matches 267; Conservative
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CORRESPONDENCE ADDRESS:
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STRANDEDNESS: singl
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Best Local Similarity
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antipathogenic substances
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INFORMATION FOR SEQ ID NO:
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    FITLE OF INVENTION:
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                                                                                                                                                                                                          Hawthorne
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TOPOLOGY: li
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Patent No. 5662898
GENERAL INFORMATION:
APPLICANT: Schupp, Thomas
                                                                                                                                                                                                                                                                              TOPOLOGY: linear MOLECULE TYPE: DNA (genomic) HYPOTHETICAL: NO
                                                                                                                                                                    LENGTH: 28958 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
            919-541-8614
                                              TELEFAX: 919-541-8689
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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US-08-456-837-6
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                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATE: US/08/457,342 FILING DATE: 01-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: 36,129
REFERENCE/DOCKET NUMBER: GGC 1506/CIP3
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-541-8614
TELEPRAY. 010-541-8614
                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 01-JUN-1995
CLASSIPECATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/457,205
FILING DATE: 01-JUN-1995
APPLICATION NUMBER: 08/258,261
FILING DATE: 08-Jun-1994
ATTORNEY/AGENT INFORMATION:
NAME: Elmer, James Scott
REGISTRATION NUMBER: 36,129
NUMBER OF SEQUENCES: 22
CORRESPONDENCE ADDRESS:
ADDRESSEE: Ciba-Geigy Corporation
STREET: 7 Skyline Drive
                                                                                                                                                                                                                                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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nucleic acid
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LENGTH: 28958 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 2.6%
Best Local Similarity 44.8%
Matches 267; Conservative
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Ligon, James M.
Ligon, James M.
Hill, Dwight Steven
Ryals, John Andrew
Gaffney, Thomas Deane
Lam, Stephen Ting
Hammer, Phillip E.
Uknes, Scott Joseph
INVENTION: Genes for the synthesis of
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APPLICANT: APPLICANT: APPLICANT:

APPLICANT:

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21917 AGGGCGGTTCTGGCAGGCCATCGAGAGCGGGAATATCGACGCGCTCAGCGGGCCAGCTCC 21976
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                               GCCTCTCACCACCTGCCTCCATGGCCCCCCCAAGACTGCCTGGCCCAGCTGCGCCTGGCGC 1090
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APPLICANT: Hill, Dwight Steven
APPLICANT: Ryals, John Andrew
APPLICANT: Ryals, John Andrew
APPLICANT: Gam, Stephen Ting
APPLICANT: Hammer, Phillip E.
APPLICANT: Hammer, Phillip E.
APPLICANT: Games for the synthesis of TITLE OF INVENTION: antipathogenic substances NUMBER OF SEQUENCES: 22
CORRESPONDENCE ADDRESS:
ADDRESSEE: Clba-Geigy Corporation
STREET: 7 Skyline Drive
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/458,076A
FILING DATE: 01-JUN-1995
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Ligon, James M.
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COMPUTER READABLE FORM:
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STATE: NY
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US-08-458-076A-6
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                                                           2271 Tciccea de cricica de contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra contra con
1391 AGCGTGCCATCCTGGGGCAGGAGGAGGCGCTGCGGCTGCACGCCCTGTGCCGCGTCCTGC 1450
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14.8%; Pred. No. 0.0067;
ve 0; Mismatches 323; Indels 6;
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APPLICANT: Uknes, Scott Joseph
IIILE OF INVENTION: Genes for the synthesis of
IIILE OF INVENTION: antipathogenic substances
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/457,646A
FILING DATE: 01-JUN-1995
CLASSIFICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US 08/457,205
FILING DATE: 01-JUN-1995
APPLICATION NUMBER: 08/258,261
FILING DATE: US-JUN-1995
APPLICATION NUMBER: US/258,261
FILING DATE: US-JUN-1995
ATTORNEY/AGENT INFORMATION:
WANDER: US-JUN-1994
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STREET: 7 Skyline Drive
CITY: Hawthorne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Schupp, Thomas
Ligon, James M.
Beck, James Joseph
Hill, Dwight Steven
Ryals, John Andrew
Gaffney, Thomas Deane
Lam, Stephen Ting
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Sequence 6, Application US/08457646A
; Patent No. 5679560
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REGISTRATION NUMBER: 36,129
REFERENCE/DOCKET NUMBER: CG
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-541-6614
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Best Local Similarity 44.8%;
Matches 267; Conservative
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TYPE: nucleic acid
STRANDEDNESS: single
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COMPUTER READABLE FORM:
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APPLICANT: Schupp
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US-08-457-646A-6
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COUNTRY:
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PRICASSILICATION DATA.
APPLICATION DATA.
APPLICATION NUMBER: US 08/457,205
FILING DATE: 01-JUN-1995
APLICATION NUMBER: 08/258,261
FILING DATE: 08-JUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: ELMCF, James SCOCT
REGISTRATION NUMBER: 36,129
REFERENCE/DOCKET NUMBER: 36,129
REFERENCE/DOCKET NUMBER: 36,129
TELEPHONE: 919-541-8614
TELEPHONE: 919-541-8614
INFORMATION FOR SEQ 1D NO: 6: SEQUENCE CHARACTERISTICS:
LENGTH: 28958 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TYPE: nucleic acid
STRANDEDNESS: single
TYPE: NO.
HYDOLGY: Inneal
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Matches 267; Conservative
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Sequence 4, Application US/08764233A Patent No. 5716849

RESULT 14 US-08-764-233A-4

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                                                                                                                                                            Genes For The Biosynthesis Of Soraphen
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                  3: Ciba-Geigy Corporation
520 White Plains Road, P.O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 435
PRIOR APPLICATION DATE:
APPLICATION NUMBER: US 08/729,214
FILING DATE: 09-0CT-1996
PRIOR APPLICATION DATE: US 08/258,261
FILING DATE: 08-JUN-1994
ATTORNEY/AGENT: INFORMATION:
NAME: Meigs, J. Timothy
REGISTRATION NUMBER: 38,241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/764,233A
                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (919) 541-8887
TELEPHONE: (919) 541-8689
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
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ilarity 44.8%;
Conservative (
GENERAL INFORMATION:
APPLICANT: Ligon, James M.
APPLICANT: Schupp, Thomas
APPLICANT: Beck, James J.
APPLICANT: Hill, Dwight S.
APPLICANT: Hill, Dwight S.
APPLICANT: Ryals, John A.
TITLE OF INVENTION: Genes F.
ATHER OF INVENTION: Genes F.
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
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; CLONE: p98/1
US-08-764-233A-4
                                                                                                                                                                                                                                                                                Tarrytown
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ORIGINAL SOURCE:
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STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                   10591
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STREET: 51
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Search completed: July 13, 2004, 08:26:36
Job time : 111.561 secs
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Best Local S
Matches 267
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22037 TTCGCCACGAGGGCAAGAGCAGGGCACGGTCGACGCCTGGCGCTACCGCATCACGTGGA
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COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: Patentin RC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/457,335A
FILING DATE: 01-00W-1995
CLASSIFICATION DATA:
APPLICATION NUMBER: US/08/457,205
FILING DATE: 08-01-1995
APPLICATION NUMBER: 08/258,261
FILING DATE: 01-01W-1995
APPLICATION NUMBER: 08/258,261
FILING DATE: 01-01W-1995
APPLICATION NUMBER: 08/258,261
FILING DATE: 01-01W-1995
APPLICATION NUMBER: 08/258,261
FILING DATE: 01-01W-1995
APPLICATION NUMBER: 06/258,261
FILING DATE: 01-01W-1995
APPLICATION NUMBER: 06/258,261
FERENCE/DOCKET NUMBER: GC 1506/CIP3
TELECOMMULCATION:
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APPLICANT: Ligon, James M.
APPLICANT: Ligon, James M.
APPLICANT: Hill, Dwight Steven
APPLICANT: Hill, Dwight Steven
APPLICANT: Ryals, John Andrew
APPLICANT: Gaffney, Thomas Deane
APPLICANT: Lam, Stephen Ting
APPLICANT: Hammer, Phillip E.
APPLICANT: Hammer, Phillip E.
APPLICANT: Genes for the synthesis of TITLE OF INVENTION: antipathogenic substances
NUMBER OF SUGENCES: 22
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: 7 Skyline Drive
Hawthorne
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GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 919-541-8689
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 28958 base pairs
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MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
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STRANDEDNESS: sing
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                                                                                                                                                                                                                                                                                                                                                                                                                    Score 57.2; DB 1; Length 28958; Pred. No. 0.0067;
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                                                          MOLECULE TYPE: DNA (genomic) HYPOTHETICAL: NO
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linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
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US-08-457-335A-6
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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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using sw model OM nucleic - nucleic search,

July 12, 2004, 19:58:24 ; Search time 559.787 Seconds (without alignments) 16460.437 Million cell updates/sec Run on:

US-10-697-266-1_COPY_103_2271 Perfect score:

1 atgatectggaggagagaggec.....tgaageaceceagggtggeeg 2169 Sequence:

IDENTITY NUC Gapop 10.0 , Gapext 1.0 Scoring table:

3373863 seqs, 2124099041 residues Searched:

6747726 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

N_Geneseq_29Jan04:* 1: geneseqn1980s:* geneseqn2001as:* geneseqn1980s:* geneseqn1990s:* geneseqn2000s:* Database

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Description	ord remin 7.8837	Nuclear Park	1 00	Himan	O Human	Human	7 Human	3 Human	Human	Himan 5	Human	Human	Human	Temul 6	5 Prosta	, w	6	Aas70406 DNA encod) 4		
	ID	AAL48837	ABV72511	ACC46698	AAS00831	AAC77780	AAS15828	AAS15827	ABX97183	ABS71856	ABS71855	AAF58361	ABX97182	AAZ15546	AAC91349	ABK92255	AAS72556	AAH75576	AAS70406	AAC76200	AAL48838	ABL14125	AAC75784	AAZ14379	
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æ	Query Match	100.0	89.9	36.8	36.0	36.0	22.9	22.9	22.8	22.7	22.7	22.5	21.4	20.1	19.3	17.5	16.4	13.9	10.9	10.1	10.0	9.5	9.4	7.6	
	Score	2169	1951	798.8	781.4	779.8	496.4	496.4	494.8	93.	493.2	487.8	463.6	436	418.2	379.2	355	301.4	235.4	219.4	217	206.6	203.8	165	
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150	143.8	108.4	108.4	108.2	103.6	97	94.6	93.4	87	72.4	71	71	69.4	68.2	69	68	66.2	63.6	63.2	62.4	62.4
24	25	56	27	28	29	30	31	32	33	34	32	36	37	38	c 39	c 40	41	c 42	c 43	44	45

ALIGNMENTS

Human protein kinase N family kinase coding sequence. BP. AAL48837 standard; cDNA; 2469 (first entry) 24-OCT-2002 AAL48837; RESULT 1 AAL48837 HARABE KERKER KARABE KA

Human; protein kinase N; kinase; PKN; eye retinoblastoma; bocio tumour; placenta choriocarcinoma; germ cell; leukocyte; uterus tumour; cancer; pre-B cell acute lymphoblastic leukaemia; Wilm's tumour; enzyme; brain anaplastic oligodendroma; uterus endometrial adenocarcinoma; cytostatic; gene therapy; chromosome 8; gene; ss.

Homo sapiens.

1. .102 /*tag= a 103. .2274 /*tag= b /product= "kinase" 2275. .2469 Location/Qualifiers Key 5'UTR 3'UTR SOC

#0200261062-A2.

08-AUG-2002.

29-JAN-2002; 2002WO-US002152.

01-FEB-2001; 2001US-00773371. 07-MAY-2001; 2001US-00849334.

(PEKE) PE CORP NY.

Ē Beasley Di Francesco V, Rusch D, Ketchum KA,

WPI; 2002-608516/65. P-PSDB; AA018602.

New human kinase peptide and nucleic acid molecule, useful for treating disorders associated with abnormal expression of kinase protein, e.g. retinoblastoma, Wilm's tumor, in drug screening assays and

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CACGCGGAGGTGGTCACGGAGCTGAAGGCTGCGGGAAGAGGCGGCGCCAGCCTGCAGGTG
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                                                                AGGCCCCTGGGGCCTTCAGCCTCCTGAGGAGAACTTCTCCCCATGCGCCGAGCCCAGAC
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                                              The present invention provides the protein and coding sequences of a novel human protein kinase N family protein. The sequences can be used in the treatment of disorders associated with the absence of, inappropriate, or unwanted expression of the protein, e.g. eye retinoblastoma, Wilm's tumour placenta choriocarcinomas, bocio tumours, pre-B cell acute and uterus endometrial adenocarcinomas. The present sequence is the cDNA of the invention. The gene is found on human chromosome 8
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Best Local Similarity 100.
Matches 2169; Conservative
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                                                                                                                                 INTSIG polypeptides, useful for diagnosing, preventing, and treating disorders associated with an abnormal expression or activity of INTSIG, e.g. neuromuscular, immunological, cardiovascular disorders, cancer and
                                                                                                                                                                                                                                                                                                           Human; intracellular signalling molecule; INTSIG; Alzheimer's disease; neucodegenerative disorder; Parkinson's disease; muscular disorder; myotomic dystrophy; catatomia; endocrime disorder; diabetes; crave's disease; cancer; leukemia; cervical cancer; breast cancer; immunological disorder; scleroderma; systemic lupus erythematosus; allergy; gastrointestinal disorder; Crohn's disease; renal disorder; Goodpasture's syndrome; infection; cardiovascular disorder; atherosclerosis; hepatic disease; cirrhosis; gene; ss.
             2143 TGGGCCAGTCCCCGGCCCTCCTCAACTGGAGCCGAAAGGCCCAGGAGGGCAAGACTGGA
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    GTGTCGCTGCTGCCCAGCTCTAGACTGCCCAGCTTGGGGGGACCGCCGGCCCGTCCTGCTG
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                                                           2083 GGCCCCAGGGGCTTCTAAGGAGCCAGAGGAGCATGGTTGCAAGACCCCGGCATCCACG
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Baughn MR, Swarnakar A, Duggan BM, Lu DAM, Thangavelu
Tang YT, Khan FA, Yao MG, Emerling BM;
                                                                                                                                                                                                                                                                                        Nucleotide sequence of a human intracellular signalling molecule.
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122. .2134
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05-JAN-2001; 2001US-0260102P.
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Claim 5; Page 119-120; 126pp; English.

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CC The present sequence encodes a human intracellular signalling molecule.

Such molecules are designated INTSIG. The INTSIG polypeptide or its
fragments, and the INTSIG polynuclectide are useful in diagnosing,
preventing, and treating disorders associated with an abnormal expression
or activity of INTSIG, such as neurodegenerative disorders (e.g.
parkinson's disease, Alzheimer's disease), muscular disorders (e.g.
myotonic dystrophy, cartaconia), endocrine disorders (e.g. diabetes,
cdrawe's disease), cancers (e.g. scleroderma, systemic lupus erythematosus,
cdrawe's disease), cancers (e.g. scleroderma, systemic lupus erythematosus,
cdrawe's disease), cancers (e.g. scleroderma, infections (e.g. viral,
callergies), gastrointestinal disorders (e.g. Crohn's disease), renal
cdisorders (e.g. Goodpasture's syndrome), infections (e.g. viral,
cdisorders (e.g. atherosclerosis), or hepatic diseases (e.g. cirrhosis),
clivrisic or its fragments may also be used in screening for compounds that
cspecifically bind to and modulate the activity of INTSIG. The
polynucleotides can be used to create humanized animals or transgenic
ccanimals to model human disease
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The invention relates to novel human diagnostic and therapeutic polynucleotides designated dithp (ACC46080-ACC46749) and to their encoded proteins (DITHP; ARRA1136-ABRA1812). The invention also relates to polynucleotide sequences at least 90% identical to the dithp cDNA sequences of the invention; recombinant vectors, host cells and rangeonic organisms comprising a dithp nucleic acid sequence; the recombinant production of DITHP proteins; antibodies specific for DITHP proteins; microarrays comprising dithp nucleic acid sequences; methods of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel human diagnostic and therapeutic polypeptide useful for identifying test compound which specifically binds to a polypeptide encoded by human diagnostic and therapeutic polynucleotide, and to induce antibodies.
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1981 TIGCAAGACCCCGGCAICCACGIGGGCCAGICCCCGGCCCCICCTCAACTGGAGCCGAAA
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17-MAY-2001; 2001US-0291849P.
17-MAY-2001; 2001US-0291849P.
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P-PSDB; ABR41761.
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detecting dithp nucleotide and protein sequences; methods of screening assessing the toxicity of test compounds using a dithp hybridisation probe. Dithp nucleic acid sequences and DITHP proteins may be used in the diagnosis of a wide variety of conditions including cancer and other cell cancers; autonimume or inflammatory disorders bacterial, viral, fungal or parasitic infections; hormonal disorders; metabolic disorders; neurological disorders; postcintestinal disorders; metabolic disorders; neurological disorders; gastrointestinal disorders; ransport of sorders; and connective tissue disorders. They may also be used to disorders; and connective tissue disorders. They may also be used to proteins can additionally be used in analysis of the proteome of a tissue of cell type and to induce antibodies. The dithp nucleic acids are additionally useful in somatic or garmline gene therapy of the disorders additionally useful in somatic or garmline gene therapy of the disorders mentioned above, as a source of antibense sequences, as a source of the protein of the generation of transgenic animal models of human disease or knock in humanised animals, in toxicological testing, and in transcript imaging. The present sequence represents a dithp cDNA encoding a DITHP protein which is involved in a biochemical pathway. Note: The sequence data for the printed in electronic format directly from WIPO at
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; cancer related protein; HBGDHII; food additive; preservative; immunogen; antibody; bone cancer; adrenal cancer; bone marrow cancer; breast cancer; lung cancer; urogenital cancer; lunnen disorder. Addison's disease; allergy; autoimmune haemolytic anaemia; autoimmune thyroiditis; diabetes mellitus; Crohn's disease; multiple sclerosis; rheumatoid arthritis; ulcerative colitis; acquired immunodeficiency syndrome; AIDS; cardiovascular disorder; myocardial ischaemia; wound healing; neurological disorder; Parkinson's disease; Alzheimer's disease; cerebral anoxia; epilepsy; viral infection; bacterial infection; fungal infection; parasitic infection; agonist; attagonist; ss.
                     1371 GCGCCAGCCTGCAGGTGGTGGTGGCTGCTGCCCAGCTCTAGACTGCCCAGCTTGGGGGACC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Twenty nine nucleic acid molecules encoding human cancer associated proteins, useful in the prevention, treatment and diagnosis of cancer, immune disorders, cardiovascular disorders and neurological diseases.
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The sequence encodes a novel Human cancer related protein. The polymucleotides and polypeptides are useful for preventing, treating or ameliorating a medical condition in e.g. humans, mice, rabbits, goats, horses, cats, dogs, chickens or sheep. The polypeptides can also be used as a food additive or preservative to increase or decrease storage capabilities. The polymucleotide are useful for thromsome capabilities. The polymucleotide are useful for chromsome capabilities are useful in the diagnosis, treatment and prevention of antagonists are useful in the diagnosis, treatment and prevention of cancer (e.g. cancers of the adrenal gland, bone, bone marrow, breast, cancers of the adrenal gland, bone, bone marrow, breast, alterninestinal tract, liver, lung, or urogenital), immune disorders (e.g. Addison's disease, allergies, autoimmune hamolytic anaemia, autoimmune thyroiditis, diabetes mellitus, Crohn's disease, multiple sclerosis, rheumatoid arthritis and ulcerative collitis, acquired immunodeficiency syndrome, AlDS), cardiovascular disorders such as myocardial ischaemias, wound healing, neurological diseases (e.g. Parkinson's diseases such as viral, bacterial, fungal and parasitic infections. Numerous examples of each type of disorder are given in the
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AAC77607 to AAC78418 encode the human cancer associated proteins given in AAG73398 to AAB4229. The proteins can have activities based on the tissues and cells the genes are expressed in. Example of activities conclude: cytostatic; proliferative; vulnerary; immunomodulator; antidabetic; antiasthmatic; antialtermatic; antiarchritic; antidabetic; antiprofunction; antiplermatic; antipacterial; antibacterial; antiprofunction; antiprofunction antibacterial; antiviral; concrept; antiprofunction and antianglogenic. The concrept; antiprofunction and alagnosing pathological conditions. Complicating medical conditions and diagnosing pathological conditions. Polymucleotides, polypeptides can be used for preventing, treating or the present invention may be used to treat immune disorders by activating to righting the proliferation, differentiation or mobilisation of immune cells, to treat disorders of haematopoietic cells, autoimmune colls inflammation, cancers, cardiovascular disorders, neurological disease and inflammation, cancers, cardiovascular disorders, neurological disease and antagonists may be also be used in drug screens. AAC78419 to
687 TCCACGIGGGCCAGICCCCGGGCCCTCCTCAACIGGAGCCGAAAGGCCCAGCAGGCAAG 746
                                                                        dermatological; neuroprotective; thrombolytic; coagulant; nootropic; vasotropic; antipsoriatic; antiangiogenic; gene therapy; inflammation; immune disorder; haematopoietic cell disorder; autoimmune disorder; allergic reaction; graft versus host disease; organ rejection; haemostatic; thrombolytic; cardiovascular disorder; infection;
                                         2095 ACTGGAGGCTGCCCCAGCCCTGTGCCCCAGGAAGCCAGCTCCGCCCTCATCCTTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                   diagnosis; cytostatic; proliferative; vulnerary; immunomodulator; antidiabetic; antiasthmatic; antirheumatic; antiarthritic; antiviral; antiinflammatory; antithyroid; antiallergic; antibacterial; cardiant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel isolated nucleic acids comprising sequences encoding peptides useful for treating or diagnosing e.g. cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                      cancer associated gene; cancer antigen; detection; cancer;
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AAC78457 and AAB44240 represent sequences used in the exemplification
                                                                                                                                                                                                                                                                                                                  1375 GGCAAGGCACACCTGAAGCGTGCCATCCTGGGGGAAGGAGGAGGAGGCTGCGGCTGCACGC
                                                                                                                                                                                 CTGTGCCGCGTCCTGCGAGGTGGACCTGCTTCGGGCTGTGTGATCTCCCGAGACGCTGCAG
                                                                                                                                                                                                                                                                                            CGCTCACTGGCCAAGTATGCGGAGCTCGACGTGAGGATGACTTCTGTGAGGCTGCCGAG
                                                                                                                                                                                                                                                                                                                                                             1555 GCCCCGGACATCCAGCCTAAGACCCACCAGAAGCCAGAGGCCAGGATGCCACGCCTGTCC
                                                                                                                                                                                                                                                                                                                                                                                         101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1675 AACCGGTGGCGGCTGGTGGGGCCCGTCCACCTGACCCGAGGAGAGGGCGCTTTGGCCTC
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                                                Sequence 1013 BP; 197 A; 328 C; 337 G; 151 T; 0 U; 0 Other;
                                                                                                                             Indels
                                                                                     Score 779.8; DB 3;
Pred. No. 5.7e-139;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2169
                                                                                         36.0%;
                                                                                                      99.68;
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Matches 792; Conservative
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                   the present invention
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BP.

AAS15828 standard; cDNA; 2100

16-JAN-2002 (first entry)

AAS15828

AAS15828
ID AAS1
XX
AC AAS1
XX
DT 16-J

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The invention relates to substantially pure prostate-specific or testis-

specific polypeptides and the nucleic acids encoding them. Also included

care vectors and host cells expressing the proteins, a transgenic animal

expressing the protein, antibodies against the proteins, probes for

ceptecting the nucleic acids, antisense molecules for the nucleic acids

and methods of isolating modulators of the proteins. Compounds that

compared the prostate specific or testis specific polypeptide are useful

compared to prostate cancer, benign prostatic hyperplasia, acute

compared the protein cancer, cryptorchidism, undescended, retractile,

cascending or vanished testis. Other proliferative disorders for which the

modulators may be used include lymphoma, leukaemia, melanoma, ovarian

concer, breast cancer, parceatic cancer, liver cancer and lung cancer.

The present sequence encodes a prostate specific protein, PSL22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            279 TCACCAGCAGATTGACAAGGAGCTGCAGATGCGGACGCGCTGAGAACCTCTACAGAGC 338
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              benign prostatic hyperplagia; acute prostatitis; testicular cancer;
cryptorchidism; testicular disorder; proliferative disorder; lymphoma;
leukaemia; melanoma; ovarian cancer; breast cancer; pancreatic cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New polynucleotide for the diagnosis, prevention and treatment for prostate and testis disorders, particularly prostate cancer, comprises prostate-specific or testis-specific nucleic acids.
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                                                                 Human; prostate specific protein; PSL22; prostate cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 22.9%; Score 496.4; DB 5; Length 2
Best Local Similarity 56.8%; Pred. No. 4.7e-85;
Matches 977; Conservative 0; Mismatches 731; Indels
Human cDNA encoding prostate specific protein PSL22.
                                                                                                                                                                                                   liver cancer; lung cancer; cytostatic; ss
                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
1. .2061
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/product= "PSL22"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; prostate specific protein; PSL22; prostate cancer; benign prostatic hyperplasia; acute prostatitis; testicular cancer; cryptorchidism; testicular disorder; proliferative disorder; lymphoma; leukaemia; melanoma; ovarian cancer; breast cancer; pancreatic cancer; liver cancer; lung cancer; cytostatic; ss.
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                                                   1443 CATTÀTATTGCCCCAGTÍCTCCA GCTGÀCAGTCACGGACTTCTTCAGAAGCTGGGCCC
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P-PSDB; AAU10192.
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Claim

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The invention relates to substantially pure prostate specific or testisseries specific polypeptides and the nucleic acids encoding them. Also included are vectors and host cells expressing the proteins, a transgenic animal expressing the protein, antibodies against the proteins, probes for cefecting the nucleic acids, antisense molecules for the nucleic acids and methods of isolating modulators of the proteins. Compounds that modulate the prostate specific or testis specific polypeptide are useful to diagnose, prevent or treat disorders of the testis or prostate concer, benign prostatic hyperplasia, acute prostatitis, testicular cancer, cryptorchidism, undescended retractile, ascending or vanished testis. Other proliferative disorders for which the modulators may be used include lymphoma, leukaemia, melanoma, ovarian cancer, breast cancer, liver cancer and lung cancer. The present sequence encodes a prostate specific protein, PSL22

Sequence 3526 BP; 992 A; 803 C; 836 G; 895 T; 0 U; 0 Other;

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GGGCTGTGACTCCCTGACGCAGATCCAGTGCGGCCAGCTGCAGAGCCGCAGGGCCCAGAT 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This invention describes novel human NOVX polypeptides which have cytostatic, cardiant, antiarteriosclerotic, antiasthmatic and hypotensive activity. Pharmaceutical compositions comprising the NOVX proteins or nucleic acid molecules or NOVX antibodies are useful for preventing or treating a disorder associated with aberrant NOVX expression or activity e.g. cancer, hypertension, atherosclerosis, cardiomyopathy or bronchial asthma. The products of the invention can be used for gene therapy or in a vaccine. ABX97008-ABX97185 are CDNA fragments amplified and isolated by the PCR primers and probes represented in ABX13460-ABX13462 and ABX97186-ABX97593. ABX97008-ABX97185 encode the NOVX proteins described in
                                                                                                                                                                                                                                   Anderson D;
                                                                                                                                                                                                                                                                                                                                                                                                      NOVX polypeptides and polynucleotides, useful for preventing or treating a disorder associated with aberrant NOVX expression or activity e.g., cancer, hypertension, atherosclerosis, cardiomyopathy or bronchial
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Pred. No. 9.4e-85;
0; Mismatches 732; Indels 12;
                                                                                                                                                                                         Kekuda
                                                                                                                                                                  pytek KA, Shenoy SG, Taupier RJ, Pena CEA, Gusev V, Ji W, Gorman L, Miller CE, Rekuda Gangolli E, Vernet CAM, Guo X, Tchernev V; Catterton E, Burgess C, Leite M, Zhong H, 1
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n L, Miller CE,
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03-DEC-2001; 2001US-0338092P.
04-DEC-2001; 2001US-0337185P.
03-JAN-2002; 2002US-0345705P.
07-MAR-2002; 2002US-00092900.
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56.7%;
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Catterton E,
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Gusev V,
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P-PSDB; ABU65216.
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976; Conserv
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Zerhusen BD, G
Patturajan M,
Fernandes ER,
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                                NOVX; cytostatic; cardiant; antiarteriosclerotic; antiasthmatic; canc
hypotensive; cardiomyopathy; bronchial asthma; gene therapy; vaccine;
human; gene; ss.
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2001US-0277239P.
2001US-0277321P.
2001US-0277327P.
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2001US-0279036P.
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200105-0281194P-
200105-0281675P-
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2001US-0332172P.
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2001US-0291240P.
2001US-0294485P.
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2001US-0277338P.
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            NOV126b cDNA
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31-MAY-2001;
18-JUN-2001;
19-JUN-2001;
19-JUN-2001;
10-JUL-2001;
31-JUL-2001;
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10-SEP-2001;
12-SEP-2001;
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31-OCT-2001;
14-NOV-2001;
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13 - WAR-2001;
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21-MAR-2001;
22-MAR-2001;
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03-MAY-2001;
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16-MAY-2001;
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30-MAR-2001;
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02-APR-2001;
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Claim 1; Page 48-49; 101pp; English.
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1773 CATICCAGGGAGCCAGGCCGCGGCGGCTGGCCTGAAGGAGGGCGACTACAITGTGTCAGT 1832
                                                                                                                                                                                                                     1833 GAATGGGCAGCCAIGCAGGTGGTGGAGACACGCGGAGGTGGTGACGGAGCTGAAGGCTGC 1892
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              microarrays, fusion proteins and screening for agents that modulate the expression of GRBP2 NA. GRBP2 is useful for identifying binding partners of GRBP2. GRBP2, GRBP2 NA and Ab are useful in therapy and in the manufacture of a medicament for the treatment or prevention of a disorder associated with increased or decreased expression or activity of human GRBP2 (e.g. tumours, liposarcoma, ichthyosis congenita III and benign
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chromosome 19q12; oncogene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel GTP-Rho binding protein 2 and nucleic acids encoding the protein, useful for the manufacture of a medicament for treating a disease associated with altered expression or activity of human GRBP2 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1753 TGGCGAGGACGAGATCGAGATGAAGTCGTGAGCCTCCTG 1792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human GTP-Rho binding protein 2 open reading frame.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; ss; GTP-Rho binding protein 2; GRBP2; chromctumour; liposarcoma; ichthyosis congenita III; benign familial infantile convulsion; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                     1893 GGGAGAGGCGCCAGCCTGCAGGTGGTGCCTGCTG
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contion of GRBP2, 19q12). GRBP2 is useful as a standard in immunoassay specific for the proteins, to be used in a therapeutic agent, as specific for the proteins, to be used in a therapeutic agent, as vaccines, to be and as articlems (e.g. for epitope mapping) or immunogens (e.g. for raising antibodies. GRBP2 NA is useful as hybridisation probes, to prime synthesis of nucleic acids, to prime first strand cDNA sequence on an mRNA template, and to drive in vivo expression of the proteins. The vector is useful for shuttling GRBP2 NA between host cells derived from disparate organisms, for inserting GRBP2 NA into host cell chromosome, corresponding sense or antisense RNA transcripts of GRBP2 NA in vitro or within a host cell, and for expressing GRBP2 alone or as fusions to heterologus polypeptides. The antibody is useful as an analytical reagent for detection and quantification of GRBP2 and as an immuno there scanning laser cytometric detection, or for fluorescent immunoassay. The present sequence is a GRBP2 CDNA sequence
associated with the chromosomal
   infantile convulsion, all
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Sequence 2061 BP; 505 A; 559 C; 574 G; 423 T; 0 U; 0 Other;

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578
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Score 493.2; DB 6; Length Pred. No. 1.9e-84; 0; Mismatches 733; Indels
           22.7%;
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                                                            Similarity
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Best Local Simi:
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ABS71855 standard; cDNA; 3484 BP.

ABS71855

田城站城

DP	789	TACCCATACTCCAAGTTACGACATGAGCCCTGCCATGCTCAGCGTGCTCGTCAAATGAT 848
ò	666	GATGGCCCAGGCAATGTGTGTTTGAGGCCTCTCACCACCTGCCTCCATGGCCCC
; 셤	849	
- č o	1059	CCAAGACTGCCTGGCCTGCGCCTGGCGCAGGAGGCCGCCCAGGTGGCAGCCGAGTA 1118
qu	903	GAATGAATTCTTCATGCTGGTGGGTGGCTCAGAGGCTGCTAAGGTGGGAAGGTCTA 962
ò	Н	17
QQ	963	102
<i>\$</i> 0	1179	m
Dp	1023	gaccagerradecracaranadadeceaecaecaecereaeceecereaeraerreaerae 1082
λo.	23	CATGGCCTCTGCGACGGCTCCCCAGGGACGAGGGCTCCCCCACGCACG
qq	TORR	
λο t	1299	CTTCCTGCAGCCCCCCAGCTCCTCTAAGCCCCCAGGCCTGTGCTGCCGCAGGA 1352 CTTCCTGCAGCCCCCCAGCTCCTCTAAGCCCCCAGGCCTTGCCTGCCGAGGA 1352 CTTCCTGCAGCAGCTGAAGCAGCTCGAGAGGTCGACAGCCTTGGCCACAGTGAAGAA 1202
3	F T T	,
λ̈	35	GCTGGAGGAGCGCAGCCAGCTTTAGCAAGGCACCTGAAGCGATCCATCC
අු	1203	170
δλ	1413	47
QQ	1263	132
ò	1473	TGTGATCTCCCAGACGTGCAGCGCTCACTGGCCAAGTATGCGGAGCTCGACCGTGAGGA 1532
qq	1323	generreneneración de a deserción de a deserción de a deserción de a deserción de a de a de a de a de a de a de
δλ	1533	TGACTICIGIGAGGCTGCGGAGGCCCCGGACTCCAGCCTAAGACCCACCAGAAGCCAGA 1592
qq	1383	reaccigeigaaceigaiceaceceaegeiigeigeigeigeigaaacigaegaagageiga 1442
Š	1593	GGCCAGGATGCCACGCTGTCCCAGGGAAGGGCCTGACATCTTCCATCGGCTGGGCC 1652
Dp	1443	CATTATATIGCCCCAGTICTCCAAGCTGACAGTCACGGACTTCTTCCAGAAGCTGGGCCC 1502
λŏ	1653	CCTGTCTGTGTTCTCAGCCAAGAACCGGTGGCGCCTGGTGGGGGCCCGTCCACCTGACCCG 1712
qa	1503	CTIATUTETTTTCGGCTAACAGCGGTGGACGCCTCCTCGAAGCATCCGCTTCACTGC 1562
λö	1713	AGGAGAGGCGCTTTGGCCTCACGCTTCGGGGAGACTCGCCTGTCCTCATCGCTGCCGT 1772
οp	1563	AGAAGAAGGGGACTTGAGGCTTGAGAGGAACGCCCCCGTTCAGGTTCACTTCCT 1622
λŏ	1773	CATTCCAGGGAGCCAGGCGGCGGGGGGCTGAAGGAGGCGCGACTACATTGTGTCAGT 1832
Db	1623	GGATCCTTACTGCTCTGCCTCGGTGGCAGGAGGAAGGAGATTATATTGTCTCCAT 1682
δ	1833	GAATGGGCAGCCATGCAGGTGGTGGACACGCGGAGGTGACGCTGAGGCTGC 1892
qq	1683	rcaccingidaaridiaagiddengaccingacidaddinaidaadcidcigaadacri 1742
λ̈	1893	GGGAGAGGGGGCCAGCCTGCAGGTGGTCGCTGCTG 1932
Ωp	1743	IGGCGAGGACGAGATCGAGATGAAGTCGTGACCTCCTG 1782
RESULT 10	9	

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Human cDNA encoding GTP-Rho binding protein 2
(first entry)
02-DEC-2002
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Human; ss; GTP-Rho binding protein 2; GRBP2; chromosome 19q12; oncogene; tumour; liposarcoma; ichthyosis congenita III; benign familial infantile convulsion; gene therapy.

Homo sapiens

EP1231216-A2

14-AUG-2002.

17-JAN-2002; 2002EP-00001026

30-JAN-2001; 2001WO-US000664. 30-JAN-2001; 2001WO-US000665. 30-JAN-2001; 2001WO-US000666. 30-JAN-2001; 2001WO-US000667. 30-JAN-2001; 2001WO-US000668. 30-JAN-2001; 2001WO-US000669. 30-JAN-2001; 2001WO-US000669.

(AEOM-) AEOMICA INC

JI Y; Shannon ME, WPI; 2002-684026/74 P-PSDB; ABG94709 Novel GTP-Rho binding protein 2 and nucleic acids encoding the protein, useful for the manufacture of a medicament for treating a disease associated with altered expression or activity of human GRBP2 protein.

Claim 1; Fig 3; 101pp; English

The invention trainers to an isolated oir-knio binding piotein 2 (whole 2) the invention trainers to at least 6 amino acids or a sequence in which at least 95% of deviations from GRBP2 sequences are conservative competitutions. Also included are an isolated mucleic acid (GRBP2 NA) encoding GRBP2 comprising the full length cDNA or CDS, fragments or variants, GRBP2 vectors, host cells, antibodies, transgenic non-human contrologue of GRBP2), diagnosing a disease caused by a mutation in human grape or altered expression of GRBP2, antagonists of GRBP2, GRBP2, antagonists of GRBP2, GRBP2, antagonists of GRBP2, GRBP2, antagonists of GRBP2, diagnosing a disease caused by a mutation in human GRBP2 or altered expression of GRBP2, antagonists of GRBP2, GRBP2 is useful for identifying binding partners of amicroarrays, fusion proteins and screening for agents that modulate the expression of GRBP2 NA and Ab are useful in therapy and in the associated with increased or decreased expression or activity of human GRBP2 (e.g. tumours, liposarcoma, ichthyosis congenita III and benign casociated with increased or decreased expression or activity of human GRBP2 (e.g. tumours, liposarcoma, ichthyosis congenita III and benign consociated with increased or decreased expression or activity of human CGRBP2 (e.g. tumours, liposarcoma, ichthyosis congenita III and benign specific for the proteins, to be used in a therapeutic agent, as tendered specific for the proteins, to be used in a therapeutic agent, as the fortune of GRBP2 (e.g. for raising antibodies. GRBP2 NA is useful as hybridisation probes, to prime synthesis of nucleic acids, to prime first strand cDNA sequence on an mRNA template, and to drive in vivo expression of the proteins. The vector is useful for shuttling GRBP2 NA between host cells derived from conserve and search of the propersory of the conserve and search of the propersory of the conserve and search of the conserve and the conserve and the conserve and the conserve and the conserve and the conserve and the conserve for expressing sense or antisense RNA transcripts of GRBP2 NA in vitro or within a host cell, and for expressing GRBP2 alone or as fusions to heterologous polypeptides. The antibody is useful as an analytical reagent for detection and quantification of GRBP2 and as an immuno therapeutic agent and is useful for flow cytometric detection, for scanning laser cytometric detection, or for fluorescent immunoassay. The invention relates to an isolated GTP-Rho binding protein 2 (GRBP2) sequence is a GRBP2 cDNA sequence

Sequence 3484 BP; 932 A; 814 C; 842 G; 896 T; 0 U; 0 Other;

ų, GATGGCCCAGGCCCAGGAATGTGTGTTTGAGGGCCTCTACCACCACCTCCATGGCCCC 1058 1118 148 279 TCACCAGCAGATTGACAAGGAGCTGCAGATGCGGACGGGCGCTGAGAACCTCTACAGAGC 338 CAGGCTAGTGCACCGGACCATGGCCCAGCCGTCCACGACTACGTGCCTGTCTCCTG 1178 339 CACCAGCAACAACGGGTGAGAGAGACGGTCGCCCTGGAGCTGAGCTACGTCAACTCCAA 398 268 458 388 1043 GGCCAGCTTAGCCTGCGTGAAGGCCCACCACTACGCGGCCCTGGCCCACTACTTCACTGC 1102 638 508 698 758 628 818 688 808 CTCCCATGCGCCGAGCCCAGACATGAGCGCTGCGTCCCTCTGCGCACTGGAGCAGCTCAT 998 219 GGGCTGTGACTCCCTGACGCAGATCCAGTGCGGCCCAGCTGCAGAGCCGCAGGGCCCCAGAT 209 GGCCÁCAAACTCAAAGGTGCGGGAGCAAGTGCGGCTGGAGCTGAAGCTTCGTCAACTCAGA CCTGCAGATGCTCAAGGAAGAGCTGGAGGGCTGAACATCTCGGTGGGCGTCTATCAGAA 89 GGGCIGTAATCCCCTTGCACAAACCGGCCGGAGTAAATTGCAGAATCAAAGAGCTGCTTT 149 GAATCAGCAGATCCTGAAAGCCGTGCGGATGAGGATCGGAGCGGAAAACCTTCTGAAAGT 329 CACAGAGGAGGCATTTACGATTCCCCTGATTCCTCTTGGCCTGAAGGAAACGAAAGGACGT GAATGAGTCGGGCCTGGAGCTGCTCACAGCCTATTACAACCAGCTGTGCTTCCTGGATGC 629 cásásirrccsarcasccasasacciscrecresasasásccastricasasac CCTGCAGCTGCTGAAGGAGGTGGAGGTCAGCGGTGGCGTGGACCTGGCCGGCA 449 ATATGAAGATGAAATTGCAGATCTTATGGATCTGAGACAAGCTTGTCGGACGCCTAGCCG 509 GGATGAGGCCGGGGTGGAACTGCTGATGACTTCATCCAGCTGGGCTTTGTCGAGAG GCGCTTCCTCACCCCTGCCAGGAGCCTCGGGCTCTTCCACTGGTACGACTCGCTTAC 759 IGGGGTCCCGGCCCAGCAGCGTGCCCTTCGAGAAGGGCAGCGTTCTCTTCAACAT 819 CGGTGCCCTCCACACGCAGATTGGGGCGCGCCAGGACCGCTCCTGCACGAGGGTGCCCG 749 GAĞTĞCCATAĞATĞCCİTTCAĞAĞAĞÇCĞCAĞĞĞGTTİTAAATTAÇCTĞAAAĞAÇACATT 459 IGGGAGCGAAGCTGTCACTGTCCCCATGATCCCCCTGGGCCTGAAGGAGACCAAGGAGCT 519 GGACTGGTCTACACCGCTGAAGGAGCTGATCTCAGTGCACTTTGGAGAGGACGGCGCCTC CTACGAGGCAGAAATCAGGGAGCTGGAGCCCTGCGGCAGGCCATGCGGACCCCCAGCCG 879 CCGCGCTATGGAGGCCTTCCAGAGGCCGCTGGGGCCTTCAGCCTCCTGAGGGAGAACTT 923 GAÁTGÁÁATTÖTTCATGÓTGGTGAGGTGGÓTCÁGGÁGGCTGCTAÁGGTGGGAGAGGTCTA GCTTGCACAAGCCCAAAAAGCGTGTTTGAGAAAATCAGCCTTCCTG-----GGATCCG CCAAGACTGCCTGGCCCAGCTGCGCCTGGCGCAGGAGGCCGCCCAGGTGGCAGCTA 983 CCAACAGCTACACGCAGCCATGAGCCGCCCGGTCAAAGAGAGAACATCCCCTACTCCTG 1179 GACTGCCCTGGTGCATGTCAAGGCCGAGTACTTCCGCTCCCTGGCCCACTACCACGTAGC 12; Length 3484; Indels Score 493.2; DB 6; Pred. No. 2e-84; 0; Mismatches 733; Query Match 22.7%; Best Local Similarity 56.7%; Matches 975; Conservative 399 579 639 669 869 1119 999 셤 Š g à d 8 qq ò 셤 à qq à 셤 В à ð 업 엄 à ò 셤 ò g ò g ð g 유 ò à 셤 ò g à

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inflammation, AIDS; Addison's disease; anaemia; arteriosclerosis; asthma;
autoimmune disorder; hepatitis; multiple sclerosis; cancer; diabetes;
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                                                                   CTTCCTGCAGC----CCCCCCACCTCCTAAGCCCCCGAGGCCCTGTGC--TGCCGCAGGA
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23-AUG-1999;
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                                                                  Hillman JL,
Lu DAM, A:
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Baughn MR
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detection; mapping; tissue typing; profiling; forensic; cancer;
genetic analysis; colorectal cancer; breast cancer; lung cancer; ss.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human gene expression product cDNA sequence SEQ ID NO:3015.
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98US-0080114P.
98US-0080515P.
98US-0080666P.
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Drmanac R,
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HYSEQ INC.
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03-APR-1998;
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The present invention describes a library of human polynucleotides comprising the sequences given in AAZ12532 to AAZ1779. Also described is a method of detecting differentially expressed genes correlated with the cancerous state of a mammalian cell, comprising detecting at least one differentially expressed gene product in a test sample from a cell

Claim 1; Page 1452; 2479pp; English.

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suspected of being cancerous, where the gene product is encoded by one of the 5248 polymucleotide sequences given in AAZ12532 to AAZ1779. The polymucleotides can be used as a source of primers and probes, which can be used for a variety of purpose, e.g. detection of expression levels, apping, tissue typing or profiling, forensics, genetic analysis and detection of polymorphisms. Polympetides encoded by the polymucleotides can be used for raising antibodies for experimental, diagnostic and therapeutic purposes. The polymucleotides may also be used to construct therapeutic purposes. The polymucleotides in expression levels between two cells (e.g. to identify abnormal or diseased tissue in a human, to condent protein); and to detect differences in expression levels between two cells (e.g. to identify abnormal or diseased tissue in a human, to dentify a genetic predisposition or susceptibility to a disease such as cancer). The polymucleotides of the invention are especially used in the diagnosis, prognosis and management of colorectal cancer, breast cancer, and lung cancer. The polymucleotides can also be used to screen for
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                                                                                                                                                                                                                                                                                                                                                                                     Length 764;
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Pred. No. 1.3e-73;
0; Mismatches 3;
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Matches 447; Conservative
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diagnostics and therapeutics. The polymucleotides are referred to as diagnostics and therapeutics. The polymucleotides are referred to as DITHP polymucleotides and polypeptides are careful for diagnosting and treating diseases such as cancer, particularly breast and ovarian cancer, and other cancers of the adrenal gland, bone, bone marrow, breast, gastrointestinal tract, liver, lung, or urogenital; immune disorders such as Addison's disease, allergies, autoimmune that an advantable of disease, multiple sclerosis, rheumatcoid arthritis and ulcerative colitis; cardiovascular disorders such as myocardial ischaemias; neurological diseases such as cerebral palsy and epilepsy, infectious diseases such as crebral palsy and epilepsy, infectious diseases such as viral, bacterial, fungal and parasitic infections; and endocrine disorders (e.g. disorders of hypothalamus), disorders associated with hypothyroidism and hyperthyroidism, pancreatic disorders (e.g. diabetes mellitus) and metabolic disorders. The DITHP polymucleotides are useful for screening for molecules that bind to or are bound by the encoded polymetides. The anti-DITHP antibodies are useful in diagnostic assays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Banville SC;
Chalup MS, Hillman JL;
Roseberry AM, Wright RJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fifty two human polynucleotides, referred to as DITHP polynucleotides, useful in the diagnosis and treatment of cancer, immune disorders and neurological diseases.
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J, Rosen BH,
Panzer SR,
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Bratcher SR, Dufour GE, Cohen HJ,
Jones AL, Yu JY, Greenawalt LB, F
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9905-0137337P.
9905-0137396P.
9905-0137411P.
9905-0147377P.
9905-0147500P.
9905-0147520P.
9905-0147520P.
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990S-0137173P.
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05-AUG-1999;
05-AUG-1999;
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02-JUN-1999;
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Daniels SE;
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Query Match Best Local Similarity

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                                                                                                            CICCAAGCTGACAGCACTACTTCCAGAAGTTGGGCCCCTTATCTGTGTTTTCGGC 1311
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Detecting a prostate cancer-associated transcript in a cell in a patient, useful for diagnosing prostate cancer (PC) or screening modulators of PC, by determining if prostate cancer-associated genes are expressed in a

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The present invention relates to methods of detecting a prostate cancerassociated transcript in a cell from a patient. The method comprises contacting a biological sample from the patient with prostate cancerassociated polynucleotides (designated PC genes) that selectively hybridise to a sequence that is at least 80% identical to them. The prostate cancerassociated polynucleotide sequences are differentially expressed in prostate tumour tissue or in prostate cancer and are derived
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  from the tissues of various organisms and humans or other mammals (e.g. mice, sheep and dogs). The methods of the invention are useful for diagnosing and treating prostate cancer in mammals. The prostate cancerassociated genes are useful for diagnosing or treating prostate cancers we well as for identifying modulators of prostate cancer or agents that inhibit prostate cancer. The nucleic acid sequences are particularly useful in gene therapy, as a vaccine or in antisense applications.

ABK92115-ABK92263 represent prostate cancer-associated polynucleotide
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Pred. No. 8.7e-63;
0; Mismatches 603;
                                                                                                      Claim 22; Page 417-418; 436pp; English.
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AJ347750 Homo sapi
AK0382775 Sequence
AK098246 Homo sapi
AK07672 Sequence
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AR132025 Drosophil
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1 (bases 1 to 2469)

1 (bases 1 to 2469)

Rusch,D., Ketchum,K.A., Di Francesco,V. and Beasley,E.M.
Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
Patent: US 6500655-A 1 31-DEC-2002; Description AC014171 1 AC092401 1 AC013431 1 linear DNA ALIGNMENTS Sequence 1 from patent US 6500655. AY391456 AX642311 AR269115.1 GI:29699963 9 10 2757 3798 2403 178343 100.0 2469 100.0 2469 89.9 37637 89.9 37637 86.0 2088 86.0 2088 86.0 2088 3647 47.8 2301 22.8 3230 22.8 3500 22.8 3500 22.8 3500 22.8 3500 22.9 3500 22.9 3500 22.9 3790 22.0 2233 20.1 2224 20.1 2224 20.1 2224 20.1 26 19025 19025 179057 61188 123016 124060 232687 261608 191558 303345 2300 185200 272301 Unknown. Unknown. 11002.2 1036.6 798.8 558.8 496.6 494.8 494.8 494.8 494.8 494.8 494.8 494.8 494.8 494.8 436 418.2 311 272.8 222.4 168.2 165.4 165.4 165.4 169.6 149.6 146.6 143.4 127 108.4 108.4 108.4 DEFINITION ACCESSION VERSION KEYWORDS ORGANISM AUTHORS TITLE RESULT 1 AR269115 LOCUS REFERENCE JOURNAL SOURCE Pred. No. is the number of results predicted by chance to have a

15.13 ANGOGECTRANANCECOCCAGANACCOCCAGANACCACCACCCCCCCCCCCCCCC	19 GGGCTTGTGATCCCTGAACCCAATCCAGCCGCTGCAGCCCCCAAGCCCCCAGCCCCCAAT 219	
13 GACATCCAGCCTAAGACCACCACAGAAGCCAGAAGCCAGGACCCCGTCCCAGGACCCAGGACCCCGAGGACCCCAAGACCCAAGAACCCAAGAAG	B & B & B & B & B & B & B & B & B & B &	_
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Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altechul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.P., Bhat, N. K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Haich, F.,
Blatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Schetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullay, S.J., Bosak, S.A., McEwan, P.J.,
McKernan, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, D.K., Wazny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Boutfard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Butterfield, Y.S., Kzzywinski, M.I., Skalska, U., Smailus, D.E.,
Generation and initial analysis of more than 15,000 full-length
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Akhter.N., Ayele.K., Becketrom-Sternberg,S.W., Benjamin,B.,
Blakealey,R.W., Bouffach,G.G., Breen,K., Brinkley,C., Brooks,S.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Mansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,C., Maskeri,B., Matrian,S.D., McCloskey,J.C.
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (06-MAR.2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Bmail: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing by: National Institutes of Health Intramural
Gaithersburg, Maryland;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
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/bb_xref="taxon:9606"
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/tissue_type="Blood, adult leukocytes"
/clone="lb="NH MGC 118"
/lab host="PH108"
/note="Yector: pCMV-SPORT6"
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'db_xref="LocusID:114822"
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3763 bp mRNA linear PRI 06-OCT-2003
Homo sapiens rhophilin, Rho GTPase binding protein 1, mRNA (cDNA
clone MGC:34714 IMAGE:5211354), complete cds.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primatee; Catarrhini; Hominidae; Homo.
                                                                                            1359 GGAGCGCAGCTTGGCAAGGCACACCTGAAGCGTGCCATCCTGGGGCAGGAGGAGG
                                                                                                                                                                                                                    GCTGCGGCTGCACGCCCTGTGCCGCGCGAGGTGGACCTGCTTCGGGCTGTGAT
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NEGGLELLTAYYNQLCFLDARFLTPARSLGLFPHWTDSLITGPRAGFEEDARGASLCAL

NIGALHTGIGARQDRSCTFGARRAMEAFQRAAGFELLRENTSHAFGPRAGFPHD

POLWMAAQAGGCFFFASARAPDGOLAGGLALAQGEAAQAAAFTRIGHTGPRAGFPUD

PVPVSWTALVHVKAEYFRSLAHYHVANALCDGSPATEGELPTHBQVFLQPPTSKRV

YAELDREDPFCAABAPDIOPKTHQKPEARWPRLSGCREDDITHBQVFLQPPTSKRW

RLVGPVHLTRGEGGFGLTLRGDSPULTAAVIPGSGADAIGHTARUFGFLSFAKNRW

RLVGPVHLTRGEGGFGLTLRGDSPVLIAAVIPGSGADAAGILKEGDYTVSFAKNRW

RHABVVTELKAAGEAGABLQVVSLLPSRRLSSRLSGDRRPVLLGPRGCKTP

ASTWASPRPLLNWSRRAQGGKTGGCPQPCAPVKPAPPSSLKHPGWP"
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/note="BRO1, Region: BRO1-like domain. This functionally uncharacterised domain is found in a number of signal uncharacterised domain is found in a number of signal uransduction proteins, including Rhophilin and BRO1"
/db_xref="CDD:pfam03097"
/db_xref="DD:pfam03097"
/note="PD2; Region: Domain present in PSD-95, Dlg, and note="PD2; Region: Domain present in PSD-95, Dlg, and ZO-1/2. Also called DHR (Dlg homologous region) or GLGF. Tratrively well conserved tetrapeptide in these domains) come PDZs have been shown to bind C-terminal polypeptides" /db_xref="CDD:smart00228"
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Pred. No. 1.6e-281;
0; Mismatches 0;
PAPPSSLKHPGWP"
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Best Local Similarity 96.3'
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The RhoA-binding protein, Rhophilin-2, Regulates Actin Cytoskeleton
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Submitted (106-MAR-2002) Dept. of Oncology, Georgetown University
Medical Center, 3970 Reservoir Rd., N.W., Washington, DC 20007, USA
Location/Qualifiers
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YVPVSWTALVHYKAEY FRSLAHYHVAMALCDGSRECPPHLPWVLPRPPRAGSQPLCPP
AATEGELEPHEQVFLQPPTSSKPRGPVLPQELEBRRQJGKAHLKRAILGGEBALRLHA
LCRVLREVDLLRAVISQTLQSISLAKYAELDREDDFCEBAEAPDI QPKTHQKPPRARMPR
LSQGKGPDI FRHLGGBLSVFSAKUKRLVGPYHLTRGEGGFGLTLRGDSPVL IAAVI PG
SQAAAAGLKEGDYI VSVNGQPCRWWRHAEVVTELKAAGEBAGALQVVSLLPSSRLPSL
GDRRPVLLGFRGLLRSQREHGCKTPASTWASPRPLLNWSRKAQQGKTGGCCPQVX
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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                       TTGCAAGACCCCGGCATCCACGTGGGCCAGTCCCCCGGCCCCTCCTCAACTGGAGCCGAAA
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Homo sapiens rhophilin-1 mRNA, complete cds.
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/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
    GGCGGCGCCAGCCTGCAGGTGGTGTCGCT
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399 CCTGCAGCTGCAGGAGGAGGAGGAGGAGGAGCTCAGCGGTGGCGTGGACCCTGGCGGGA 458

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231 CCTGCAGCTGCTGAAGGAGCTGGAAGAGCTCAGCGGTGGCGTGGACCCTGGCCGGCA 290 459 TGGGAGCGAAGCTGTCCCCATGATCCCCCTGGGCCTGAAGGAGCT 518			639 GAATGAGTCGGGCCTGGAGCTGCTCACAGCCTATTACAACCAGCTGCTTCCTGGATGC 698 		759 TGGGGTCCCGGCCCAGCAGGTGCCCTGGACAAGGGCAGCGTTCTCTTCAACAT 818	819 CGGTGCCTCCACACGCAGATTGGGGCGCGCGAGGACCGCTCCTGCACCGAGGGTGCCCG 878	879 CCGCGCTATGGAGGCCCTTCCAGAGGCCGCTGGGGCCTTCAGCCTCCTGAGGGAGAACTT 938	939 CICCCATGCGCCGAGCCCAGACATGAGCGCTGCGTCCCTTGCGCACTGGAGCAGCTCAT 998	999 GAIRGCCCAGGCCCAGGAAIGIGIGITIGAGGGCCTCTCACCACCTGCCTCCATGGCCCC 1058 	1059 CCAAGACTGCCTGGCCCAGCTGGGCCGCAGAGGCCGCCCAGGTGGCCGGTA 1118 	1119 CAGGCTAGTGCACCGGACCATGGCCACCACCGTCCACGACTACGTGCCTGTCTCCTG 1178 		1239 CATGGCCCTCTGCGACGGCTCCC	1262		1343 TGCCGCAGGAGCTGGAGGAGCGCAGGCTTGGCAAGGCACACCTGAAGCGTGCCATCC 1402 	1403 TGGGGCAGGAGGAGCGCTGCGCCTGTGCCGCTGTGCCGTCTGCGGGAGGTGGACC 1462

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Pred. No. 2.2e-162;
0; Mismatches 383; Indels
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Best Local Similarity 75.9%;
Matches 1450; Conservative (
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DEFINITION

RESULT B BC052010

ACCESSION

VERSION KEYWORDS

ORGANISM

REFERENCE AUTHORS

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/product="Rhpn1 protein"
/product="Rhpn1 protein"
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EKGSVLFNIGALHTQIGARQDCSCTEGTNHAARAPQRAAFRILKENFSHAPSFDNS
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AQPPVRDYLPASWTNLAHVKAEHFCALAHYHAAMALCESHPAKGELARQEHVFOPSTP
HEPLGPTLPQHPEDRRKLGGGAAASHLVQSPAQGGPAAGCGDSGTAALPGQVLTARAR
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                             passed the following selection criteria: matched mRNA gi: 6680084 Location/Qualifiers
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47.8%; Score 1036.6; DB 10; Length 2301;
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Klausner, R.L., Feingold, E.A., Grouse, I.H., Derge, J.G.,
Klausner, R.L., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Haieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Morckernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.M.,
Fahey, J., Helton, B., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Rodrigues, S.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Schmutz, J., Myers, R.M.,
Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences
                                                   TIGCAAGACCCCGGCAICCACGIGGGCCAGICCCCGGCCCTCCTCAAAAGAGCCGAAAA 2078
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2301 bp mRNA linear ROD 08-OCT-2003
Mus musculus rhophilin, Rho GTPase binding protein 1, mRNA (cDNA
clone MGC:62337 IMAGE:5717786), complete cds.
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Contact: MGC help desk
Email: cgapber@mail.nih.gov
Tissue Procurement: Dr. Jim Lin, University of Iowa
CDNA Library Preparation: M. Bento Soares, University of Iowa
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLML)
DNA Sequencing by: Sequencing Group at the Stanford Human Genome
Center, Stanford University School of Medicine, Stanford, CA 94305
Web site: http://www-shgc.stanford.edu
Contact: (Dickson, Mark) mcd@paxil.stanford.edu
Dickson, M., Schmutz, J., Grimwood, J., Rodriquez, A., and Myers,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 114 Row: k Column: 5
This clone was selected for full length sequencing because it
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
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Submitted (01-MAY-2003) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
GGACCGCCCGCCCGTCCTGGGCCCCCAGGGGGCTTCTAAGGAGCCAGAGGAGCATGG
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Mus musculus
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Strausberg, R.
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2388257

JOURNAL

TITLE

MEDLINE PUBMED REFERENCE AUTHORS TITLE JOURNAL

REMARK COMMENT

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/tränslation="MTDALLPAAPOPLEKESDGYFRKGCNPLAQTGRSKLQNQRAALN
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                                                Eukaryota, Metazoa; Chordata, Craniata; Vertebrata, Euteleostomi;
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Submitted (20-SEP-2001) Pirson I., Interdisciplinary Institute
IRIBHN, Universite Libre de Bruxelles, 1070, Brussels, BELGIUM
Location/Qualifiers
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                                                                        Mircescu, H., Steuve, S., Savonet, V., Degraef, C., Mellor, H., Dumont, J.E., Maenhaut, C. and Pirson, I. Degraef, C., Mellor, H., Identification and characterization of a novel activated RhoB binding protein containing a PDZ domain whose expression is specifically modulated in thyroid cells by cAMP 22361238 Eur. J. Biochem. 269 (24), 6241-6249 (2002)
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Pred. No. 1.1e-77;
0; Mismatches 697; Indels 12;
                                                                                                                                                                                                                                                                                                                                                       effector"
                                                                                                                                                                                                                                                                                          /organism="Canis familiaris"
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/function="putative RhoB
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Pirson, I.
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CACGGAGGAGGCGTTTACGGTCCCCTTGATTCCGCTTGGCCTGAAGGAAACCAAGGACAT

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MAM 06-JAN-2003

linear

mRNA

3230 bp

CFA347749

Canis familiaris mRNA for p76RBE protein. AJ347749 GI:23304859

519

09 1653 CCTGTCTGTGTCTCAGCCAAGAACCGTTGG Db 1524 [
190 TRACTICTICAGIOCITICIA MOGRACIA TRACACCIA CARACTERIA MOGRACIA CONTROL (1988)
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Wagner, L., Shenmen, C.M., Schuler, G.D., Hagner, L., Schefer, C.F., Bhat, N.K., Lettow, K.H., Schefer, C.F., Bath, N.K., Lettow, A.A., Rubin, G.M., Hong, L., analdo, M.F., Casavant, T.L., nuddin, T.B., Toshiyuki, S., Loquellano, N.A., Peters, G.J., S.S., Loquellano, N.A., Peters, G.J., S.S., McEwan, P.J., A.M., Gay, L.J., Hulyk, S.W., A.M., Gay, L.J., Hulyk, S.W., A.M., Madan, A., Rodrigues, S., A.M., Madan, A., Rodrigues, S., A.M., Woung, A.C., Shevchenko, Y., Touchman, J.W., Green, E.D., Grimwood, J., Schmutz, J., Myers, R.M., Grimwood, J., Schmutz, J., Myers, R.M., A.S., Shallus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grimwood, J., Salalus, D.E., A.S., Grims, G. More than 15,000 full-length
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GCGGCTGGTGGGCCCGTCCACCCG 1712
                                                                  gacaccrccrcgaagcatrcactrcacrgc 1583
                                                                                                                                                GGGAGACTCGCCTGTCCTCATCGCTGCCGT 1772
                                                                                                                                                                                                                          addaakcrcccadrecaagrccarrrccr 1643
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181 J. Brownstein (NHGRI) & Shiraki
XIKEN)
.M.A.G.E. Consortium (LLNL)
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starrhini; Hominidae; Homo.
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Genomics Office, National Cancer
om 11A03, Bethesda, MD 20892-2590,
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ersion replaced gi:22209018.
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                                                                                                                                                             TGGGAGCGAAGCTGTCCCCATGATCCCCCTGGGCCTGAAGGAGACCAAGGAGCT
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VLFWTGALYTQIGTRCDRQTQAGLESAIDAFQRAAGVLAYLKDTFTHTPSYDMSPANL
SVLYKWHLAAQAGSSVPEKISLBFGIRNEFFMLYKOGRAAKVGEVYQQLHAAMSQAPVR
ENIPYSWASLACVRAHTYAALHYFTPILLIDHQVKGFTDLDHQEKCLSQLYDHMPEG
ITPLATIKNDQORQLGKSHLRRAMAHHEESVREASLCKKLRSIEVQVKLSQLYDHMPEG
ITTAAQHQEBDLLMLIDAPSYVAKTEQEVNIIILPOFSKLTYTDFFQKLGPLSVFSAN
KRWTPRRSIFFTAEEGDLGFTLMGAPAVQVHFLDPYCSASVAGAREQIYSIQUVDC
KWLTSRWKLLKSFGEBDIINKVVSLLDSTSSWHKKSATYSVGMXTYSMLCLAIDD
DDKTDKTKKISKKLSFASFGEBDIINKVVSLLDSTSSWHKKSATYSVGMXTYSMLCLAIDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /translation="mydallprapoplekkndgyfrkgcnplaotgrsklongraaln
OQIIKAVRMRTGAENLLKVATNSKVREOVRLELSFVNSDLOMLKEELEGINISVGYYO
NTBERATIPLIPLGLKETKDVDFAVVLKDFILEHYSEDGYLYEDEIADLMDLRQACRT
                                                                                                                                                                                              because it
RNA gi: 23510298.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /Joce="PDZ; Region: Domain present in PSD-95, Dlg, and ZO-1/2. Also called DHR (Dlg homologous region) or GLGF (relatively well conserved tetrapeptide in these domains). Some PDZs have been shown to bind C-terminal polypeptides" /db_xref="CDD:smart00228"
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                                                                                                                         Clone distribution: MGC clone distribution information can be fou through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 34 Row: j Collumn: 22. This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 2351025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="BRO1; Region: BRO1-like domain. This functionally uncharacterised domain is found in a number of signal transduction proteins, including Rhophilin and BRO1" /db_xref="CDD:pfam03097"
                                                                           Anuradha
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DNA Sequencing by: Institute for Systems Biology http://www.systemsbiology.org contact: amadan@systemsbiology.org Anup Madan, Jessica Pahey, Erin Helton, Mark Ketteman, Anurac Madan, Stephanie Rodrigues, Amy Sanchez and Michelle Whiting
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /product="rhophilin-like protein"
| Protein | de="Anals447.1"
| db_xref="GI:22209019"
| db_xref="LocusID:85415"
                                                                                                                                                                                                                                                                                                                                      /clone="MGC:26769 IMAGB:4830913"
fitssue type="Testis"
/clone_lib="NIH MGC_97"
/lab_host="DB10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 496.4; DB 9;
Pred. No. 5.9e-68;
0; Mismatches 731;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="HR1; Region: Hr1 repeat"
/db_xref="CDD:pfam02185"
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IRIBHN, Universite Libre de Bruxelles, 1070, Brussels, BELGIUM
Location/Qualifiers
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Isogai,T., Sugiyama,T., Otsuki,T., Wakamatsu,A., Sato,H., Ishii,
Yamamoto,J.I., Isono,Y., Hio,Y., Otsuka,K., Nagai,K., Irie,R.,
Tamechika,I., Seki,N., Yoshikawa,T., Otsuka,M., Nagahari,K. and
        Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo
                                                                Adauho, Y.
Full-length cDNA sequences
Full-length cDNA sequences
Patent: EP 1347046-A 2397 24-SEP-2003;
Research Association for Biotechnology (JP)
Location/Qualifiers
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                                                                                                             12;
                                                                               Length 3500;
                                                                                                          Indels
                                                                          Score 494.8; DB 6;
Pred. No. 1e-67;
0; Mismatches 732;
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                          22.8%;
                                                                      Query Match 22.8
Best Local Similarity 56.7
Matches 976; Conservative
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Homo sapiens Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;

linear

DNA

AX835273 3500 bp DN Sequence 2397 from Patent EP1347046. AX835273

AX835273.1 GI:39921408

RESULT 13
AX835273
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM

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Uppublished

2 (bases 1 to 3500)

S Isogai, T. and Yamamoto,J.

Direct Submission

L Submitted (04-JUL-2002) Takao Isogai, FLJ Project (HRI Team); 2-6-7

Exarusa-Kamatari, Kisarazu, Chiba 292-0912, Japan

Kazusa-Kamatari, Kisarazu, Chiba 292-0912, Japan

(E-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986)

NEDO human cDNA sequencing project supported by Ministry of

Rconomy, Trade and Industry of Japan; cDNA full insert sequencing:
Research Association for Biotechnology (RAB); cDNA library

Construction: Helix Research Institute (HRI) (supported by Japan

Key Technology Center etc.); 5'- & 3'-end one pass sequencing: RAB,

HRI, and Biotechnology Center, National Institute of Technology and

Evaluation; clone selection for full insert sequencing: HRI and

RAB; annotation: HRI and RAB.

Location/Qualifiers
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                  Oshima, A., Takahashi-Fujii, A., Tanase, T., Imose, N., Takeuchi, K., Arita, M., Musashino, K., Yuuki, H., Hara, H., Sugiyama, T., Irie, R., Otsuki, T., Sato, H., Wakamatsu, A., Ishii, S., Yamamoto, J., Isono, Y., Satio, K., Nishikawa, T., Kimura, K., Yamashita, H., Matsuo, K., Nakamura, Y., Sekine, M., Kikuchi, H., Kanda, K., Wagateuma, M., Murakawa, K., Kanehori, K., Sugiyama, A., Kawakami, B., Suzuki, Y., Sugano, S., Nagahari, K., Masuho, Y., Nagai, K. and
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/tissue type="uterus"
/clone lib="UTERU2"
/note="cloning vector: pME18SFL3"
                                                                                                                                                                                                                    Isogai,T.
NEDO human cDNA sequencing project
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/mol_type="mRNA"
/db_xref="taxon:9606"
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Best Local Similarity 56.7
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Homo sapiens cDNA FLJ40927 fis, clone UTERU2006593, weakly similar to GTP-RHO BINDING PROTEIN 1.
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oligo capping; fis (full insert sequence)
Homo sapiens (human)
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